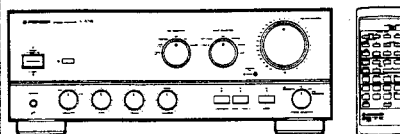


Service Manual

PIONEER®
The Art of Entertainment



ORDER NO.
ARP2520

STEREO AMPLIFIER **A-701R** **A-701R-G**

A-701R AND A-701R-G HAVE THE FOLLOWING:

Type	Model		Power Requirement	Remarks
	A-701R	A-701R-G		
HEZ	○	○	AC 220 V - 230 V, 240 V (switchable)*	

* Change the connection of the power transformer's primary wiring.

- This manual is applicable to the following: A-701R/HEZ; A-701R-G/HEZ.
- For the following: A-701R-G/HEZ, refer to page 41.
- A-701R-G is the same as A-701R except for color.
- Ce manuel pour le service comprend les explications de réglage en français.
- Este manual de servicio trata del método ajuste escrito en español.

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FS APR. 1992 Printed in Japan

1. EXPLODED VIEWS, PACKING AND PARTS LIST

NOTES:

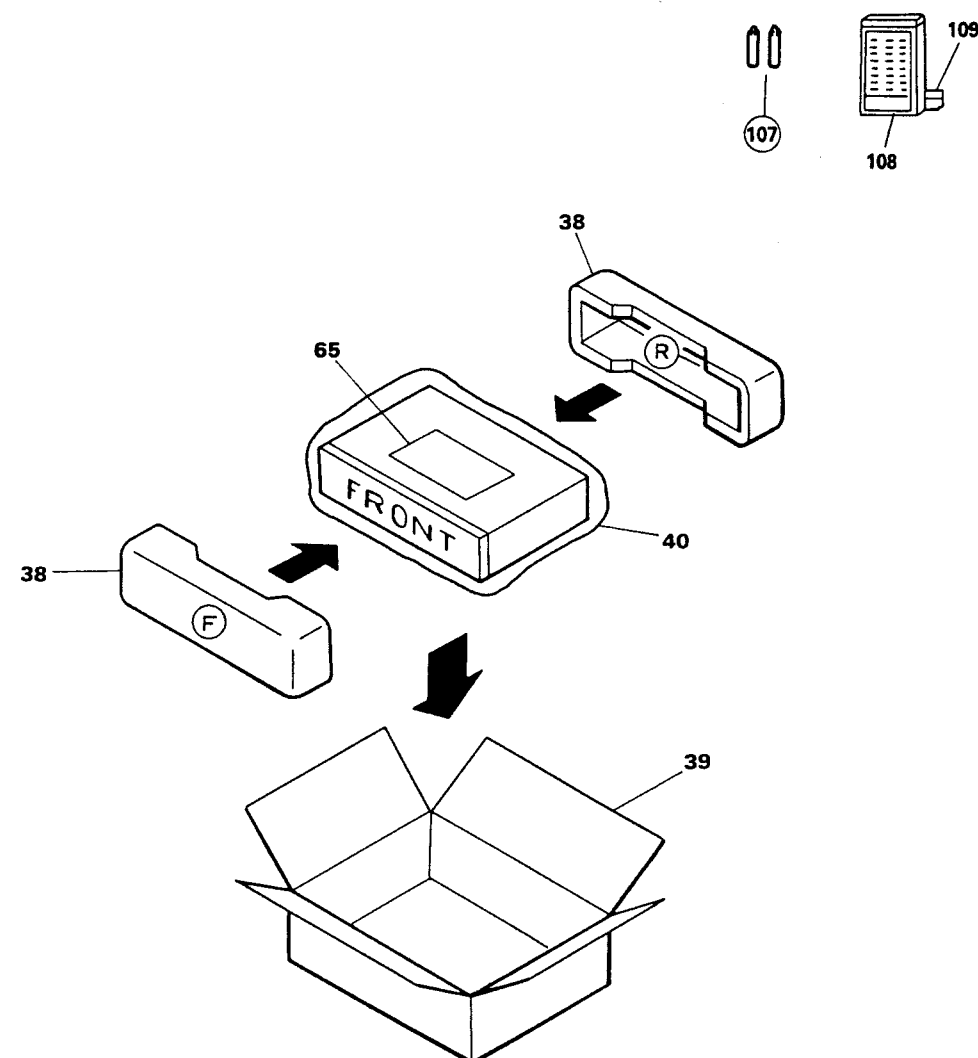
- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "●" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

Parts List

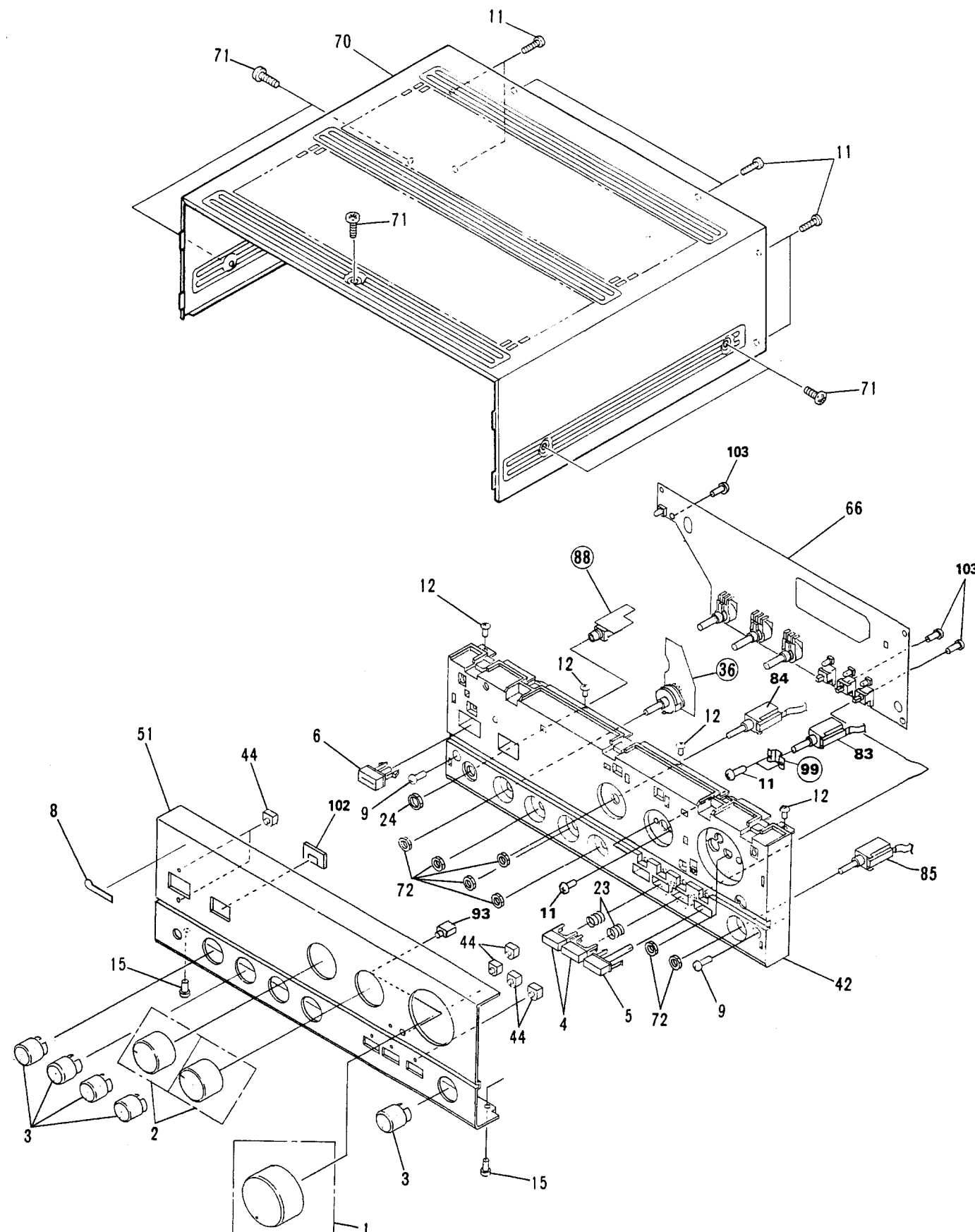
Mark No.	Description	Parts No.	Mark No.	Description	Parts No.
1	ROTARY KNOB L	AAB1222	NSP 46	PUSH JOINT	AMR1709
2	ROTARY KNOB M(PLS)	AAB1223	NSP 47	HEAT SINK HOLDER F	AMR2286
3	ROTARY KNOB S(PLS)	AAB1224	NSP 48	HEAT SINK HOLDER R	AMR2287
4	PUSH KNOB	AAD1536	NSP 49	RIGHT FRAME	ANA1038
5	DIRECT KNOB	AAD1560	NSP 50	TRANS. FRAME	ANA1131
6	POWER KNOB	AAD2275	51	FRONT PANEL	ANB1512
NSP 7	REC OUT ASSY	AWZ4064	NSP 52	REAR PANEL	ANC1891
8	NAME PLATE (METAL)	AAM1029	NSP 53	PANEL STAY	AND1052
9	SCREW	ABA-298	● 54	POWER L ASSY	AWZ4282
10	SCREW (STEEL)	ABA1004	NSP 55	BOTTOM PLATE	ANF1013
11	SCREW (STEEL)	ABA1009	NSP 56	VOLUME HOLDER	ANG1395
12	SCREW (STEEL)	ABA1011	NSP 57	VOLUME ASSY HOLDER	ANG1573
13	SCREW (STEEL)	ABA1053	NSP 58	POWER ASSY HOLDER F	ANG1575
14	SCREW (STEEL)	ABA1047	NSP 59	POWER ASSY HOLDER R	ANG1576
15	SCREW (STEEL)	ABA1048	NSP 60	EARTH PLATE	ANG1578
16	SCREW (STEEL)	ABA1050	NSP 61	TRANSISTOR HOLDER	ANG1585
17	SCREW	ABA1056	NSP 62	HEAT SINK	ANH1336
18	SCREW	ABA1082	NSP 63	HEAT SINK	ANH1337
19	SCREW	ABA1088	64	LONG SHAFT ASSY	ANL1047
20	SPACER	ABF1002	65	OPE. INSTRUCTIONS (English, French, German, Italian, Dutch, Swedish, Spanish, Portuguese)	ARE1240
21	WASHER	ABF1017	● 66	TONE AMP ASSY	AWZ4069
NSP 22	SPACER	AEC1396	● 67	POWER SUPPLY ASSY	AWZ4081
23	SPRING	ABH1034	NSP 68	SPEAKER TERM ASSY	AWZ4230
24	NUT	ABN-065	● 69	PHONO AMP ASSY	AWZ3436
25	FLANGE NUT M9	ABN-072	● 70	METAL BONNET	AZN1804
Δ 26	AC POWER CORD	ADG1049	71	SCREW	FBT40P080FZK
NSP 27	CUSHION C (RUBBER)	AEB-270	72	NUT	NK90FCU
NSP 28	NYLON BINDER	AEC-093	73	SCREW	VMZ30P060FCU
● 29	POWER R ASSY	AWZ4283	Δ 74	ELECTR. CAPACITOR (C1)	ACH1194
30	STRAIN RELIEF	AEC-882	Δ 75	FUSE(T2.5A) (FU3)	AEK-512
NSP 31	SPACER	AEC1065	Δ 76	TRANSISTOR (Q1)	2SC3281
NSP 32	NYLON RIVET	AEC1160	Δ 77	TRANSISTOR (Q155)	2SC4137
● 33	CONTROL ASSY	AWZ4068	Δ 78	TRANSISTOR (Q156)	2SC4137
NSP 34	SPACER	AEE1013	Δ 79	TRANSISTOR (Q2)	2SC3281
35	SHEET	AEE1014	Δ 80	TRANSISTOR (Q3)	2SA1302
NSP 36	SPEAKER SW ASSY	AWZ4070	Δ 81	TRANSISTOR (Q4)	2SA1302
NSP 37	BINDER	AEC-826	NSP 82	SPACER	AEC1395
38	STYROL PROTECTOR	AHA1070	NSP 83	ROTARY FUNC ASSY	AWZ4065
39	PACKING CASE	AHD2269	84	SWITCH (S3)	ASU1045
40	PACKING SHEET	AHG1021	85	SWITCH (S4)	ASU1044
NSP 41	TERMINAL SCREW	AKE-031			
42	PANEL BASE	AMB1799			
43	FOOT	AMR1159			
44	INDICATING LENS	AMR1160			
45	HOLDER	AMR2417			

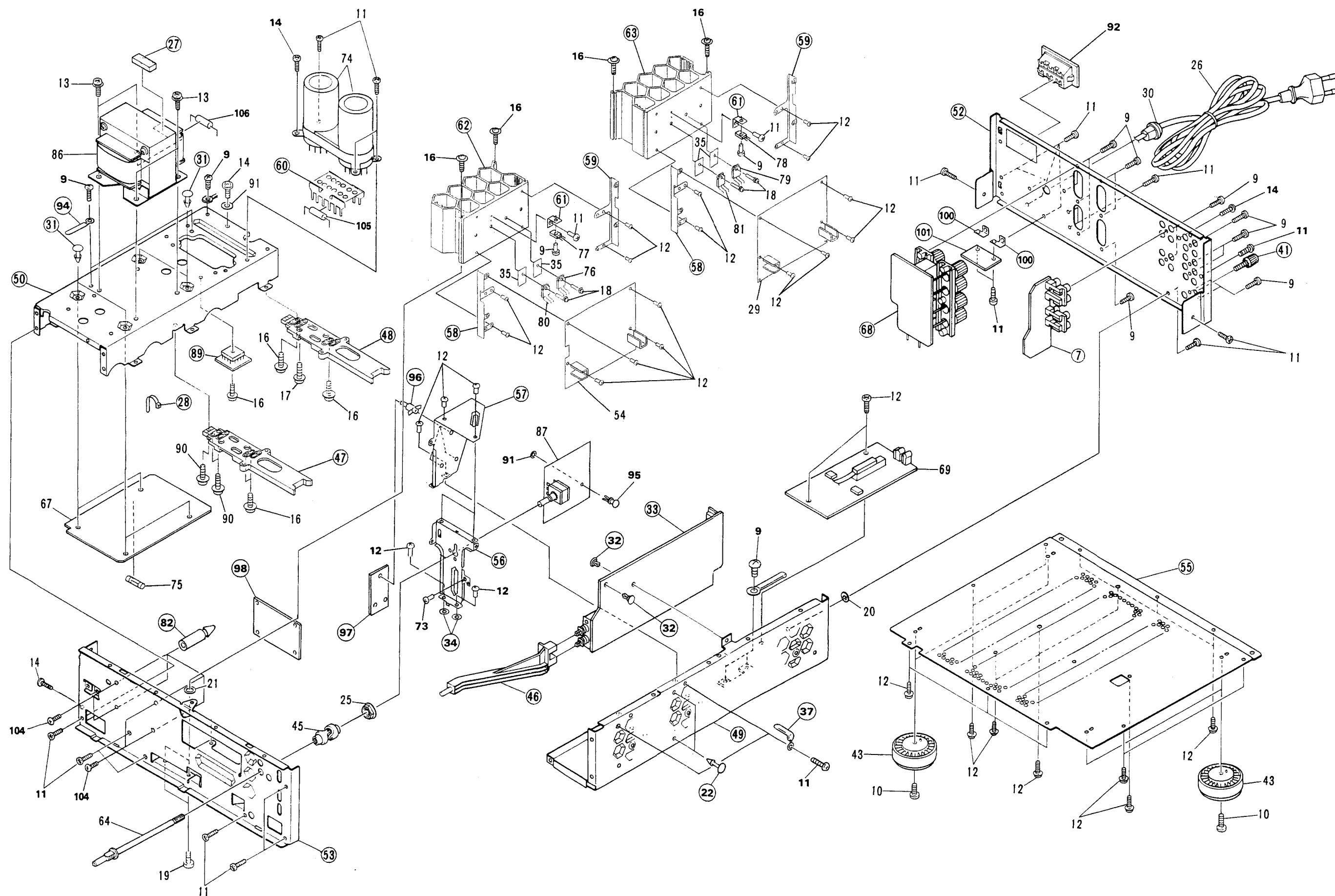
Mark	No.	Description	Parts No.	Mark	No.	Description	Parts No.
△	86	POWER TRANSFORMER (T1)	ATS1422	NSP	101	SR ASSY	AWZ4066
●	87	VR ASSY	AWZ4063		102	ACRYL(SENOR)	AAK1760
NSP	88	HEADPHONE ASSY	AWZ3515		103	SCREW	BPZ30P080FZK
NSP	89	DIODE ASSY	AWZ4392		104	SCREW	VBZ35P080FMC
	90	SCREW (STEEL)	ABA1129	△	105	CARBON FILM RESISTOR (R1)	RD1/4PMF100J
A	91	WASHER	ABE-053	△	106	CARBON FILM RESISTOR (R2)	RD1/4PMF010J
	92	AC SOCKET 3-P	AKP-502	NSP	107	BATTERY(R03,AAA)	AEX-021
	93	KNOB (PLASTIC)	AAD1016		108	REMOTE CONTROL UNIT (CU-A001)	AXD1211
	94	BINDER	AEP-215		109	BATTERY COVER	PZN1001
	95	PIN GROMMET	AEC1015				
NSP	96	PCB SUPPORT	AEC1215				
NSP	97	PROTECTION ASSY	AWZ4277				
NSP	98	SUBTRANS ASSY	AWZ4067				
NSP	99	VOLUME HOLDER	ANG1661				
NSP	100	BRACKET B	ANG1557				

Packing



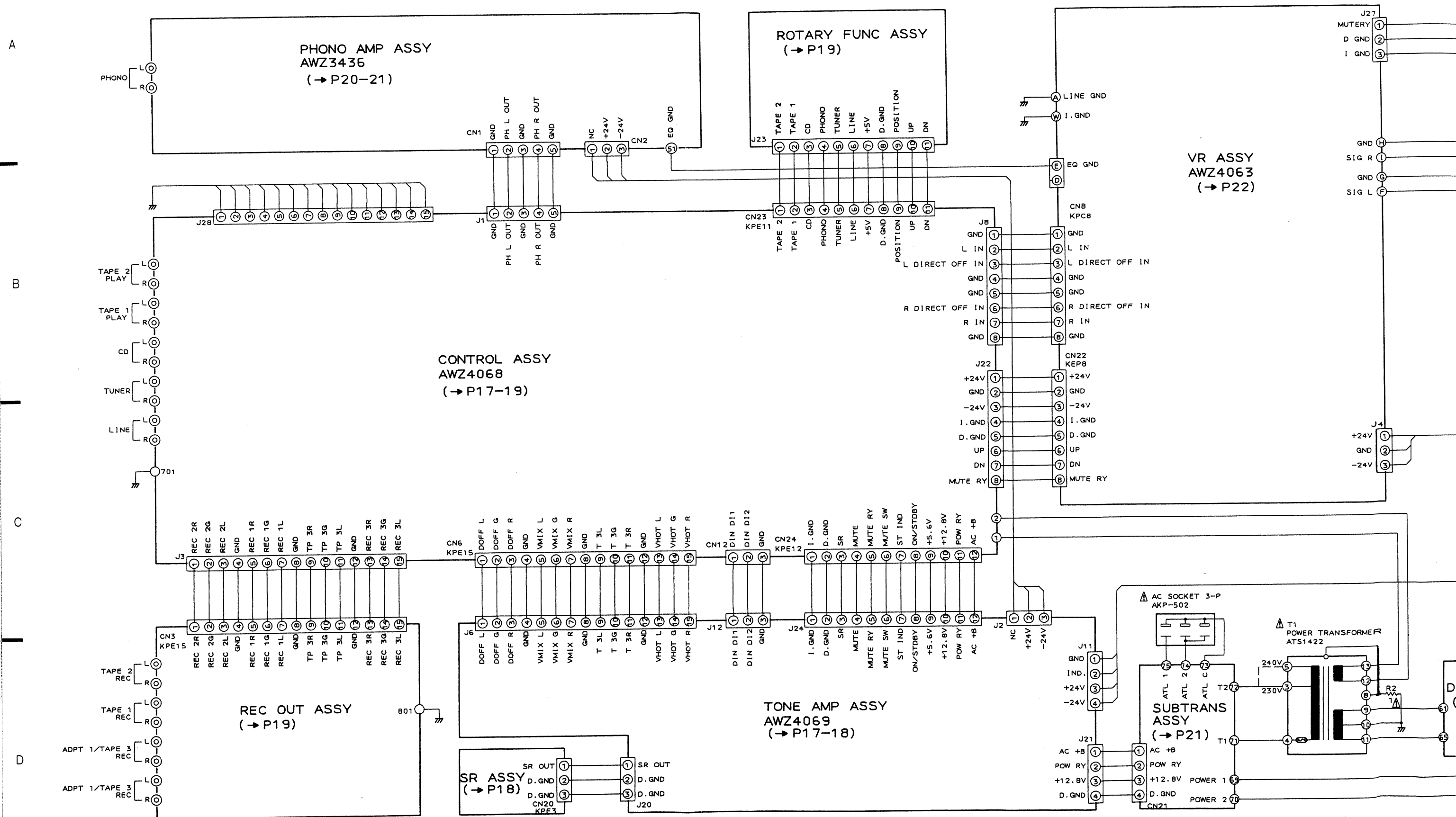
• Exterior





2. SCHEMATIC AND PCB CONNECTIONS DIAGRAMS

2.1 OVERALL SCHEMATIC DIAGRAM

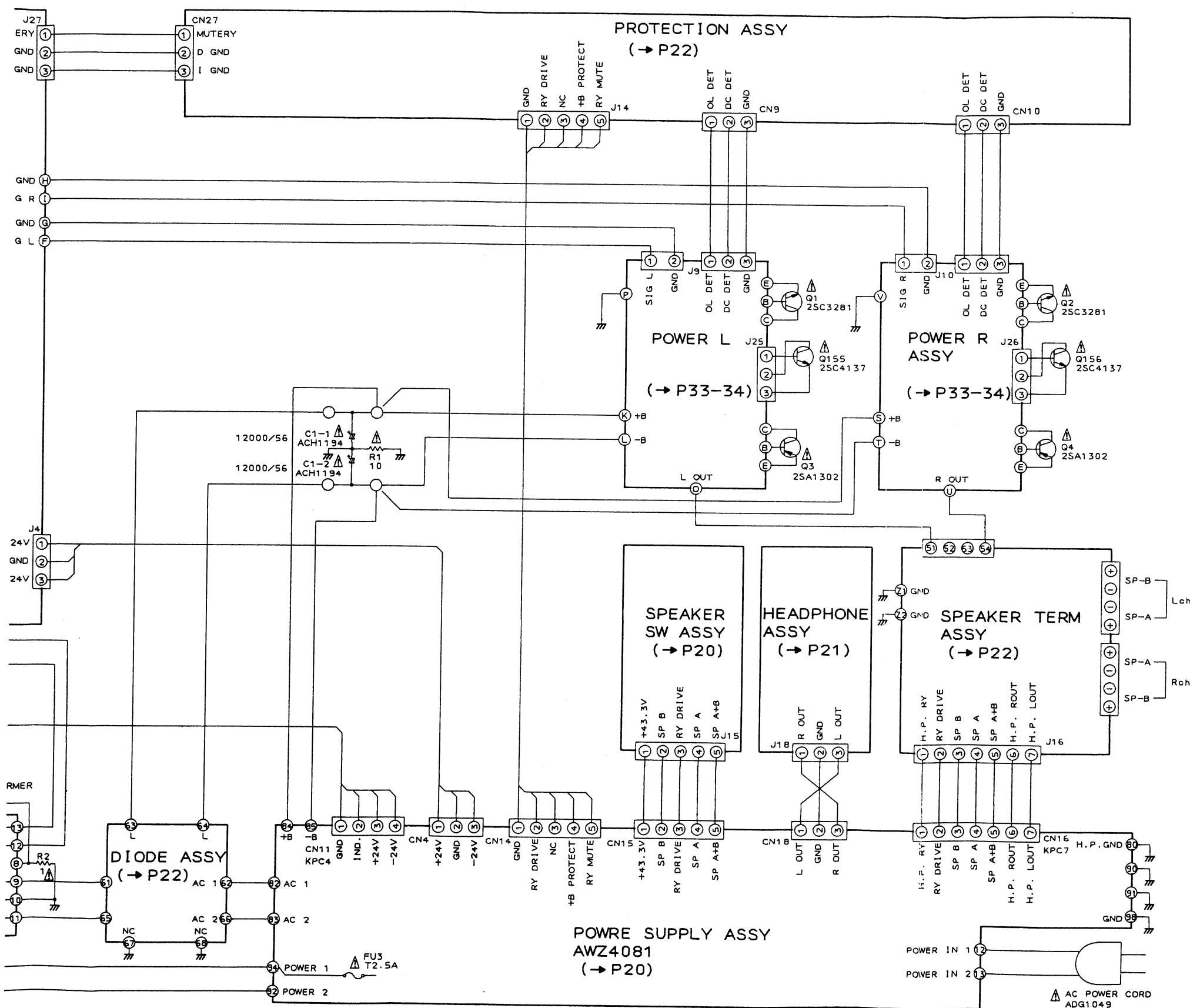


A

B

C

D



1. RESISTORS :

Indicated in Ω , 1/4 W, 1/6 W and 1/8 W, $\pm 5\%$ tolerance unless otherwise noted k ; k Ω , M ; M Ω , (F) ; $\pm 1\%$, (G) ; $\pm 2\%$, (K) ; $\pm 10\%$, (M) ; $\pm 20\%$ tolerance.

2. CAPACITORS :

Indicated in capacity (μ F)/voltage(V) unless otherwise noted p ; pF. Indication without voltage is 50 V except electrolytic capacitor.

3. VOLTAGE, CURRENT :

$\square$; DC voltage (V) at no input signal unless otherwise noted.

$\square$ V ; Signal voltage at rated power.

$\rightarrow$ mA or $\leftarrow$ mA ; DC current at no input signal unless otherwise noted.

4. OTHERS :

$\rightarrow$; Signal route

$\odot$; Adjustment point

The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

$\times$ marked capacitors and resistors have parts numbers.

∇ (Red) : Measurement point

This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

5. SWITCHES : (The underline indicates the switch position.)

CONTROL ASSY

S701: FUNCTION SEL (TAPE2 - DAT/TAPE1 - CD - PHONO - TUNER - LINE)

S702: REC SELECTOR (TAPE 2 $\blacktriangleright$ 1 - TAPE 1 $\blacktriangleright$ 2 - SOURCE - OFF - CD - TUNER)

S703: DIRECT (ON - OFF)

TONE AMP ASSY

S301: ADPT1/TAPE3 (ON - OFF)

S302: LOUDNESS (ON - OFF)

S303: POWER (STANDBY / ON)

S304: MUTING (ON - OFF)

SPEAKER SW ASSY

S401: SPEAKERS (OFF - A - B - A+B)

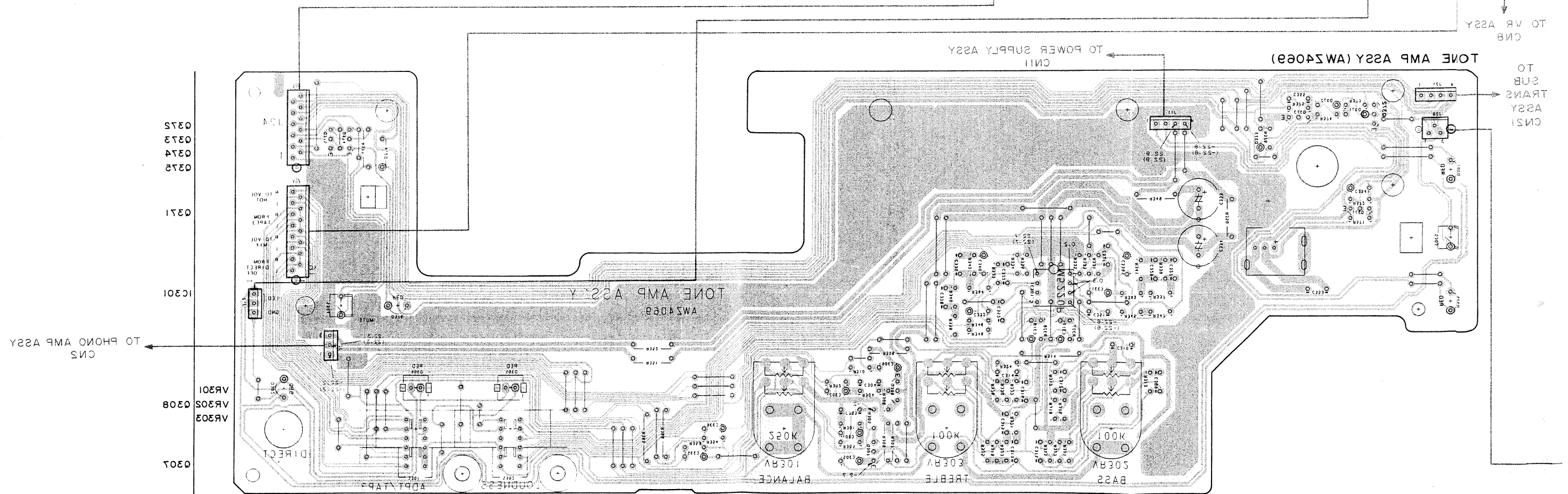
PHONO AMP ASSY

S501: PHONO SELECTOR (MC SUBSONIC - MC - MM - MM SUBSONIC)

ROTARY FUNC ASSY

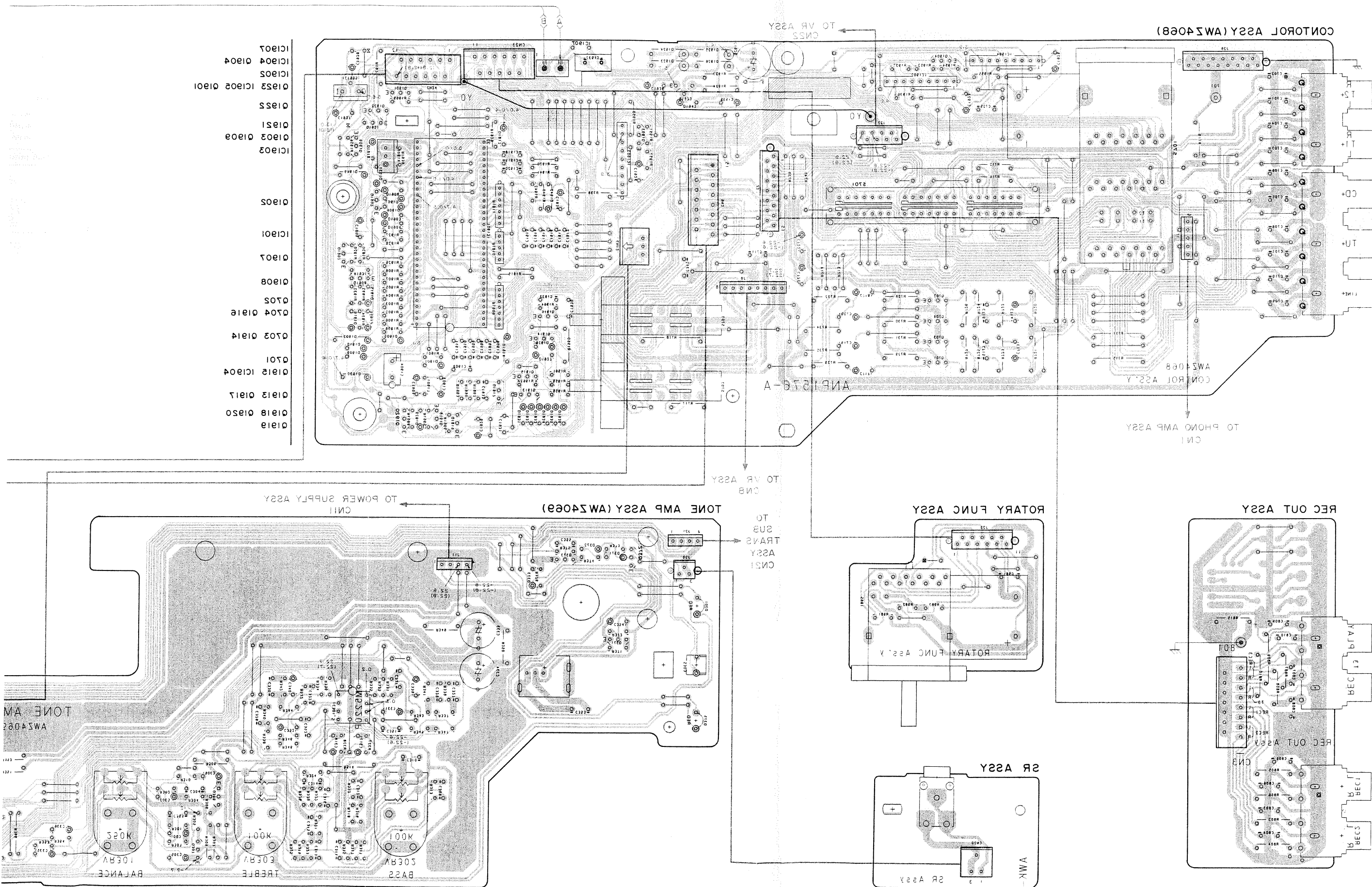
S981: INPUT SELECTOR (TAPE2 - DAT/TAPE1 - CD - PHONO - TUNER - LINE)

01A18 01A50
 01A13 01A12
 01A12 1C1A04
 02A1 02A3 01A14
 02A4 01A16
 02A5 01A08
 01A02 1C1A01
 01A05 1C1A03
 01A03 01A09
 01A51 01A55
 01A52 1C1A02 01A01
 1C1A05 01A04
 1C1A02



2.5 CONTROL, TONE AMP, REC OUT, ROTARY FUNC AND SR ASSEMBLIES

This P.C.B. connection diagram is viewed from the foil side.



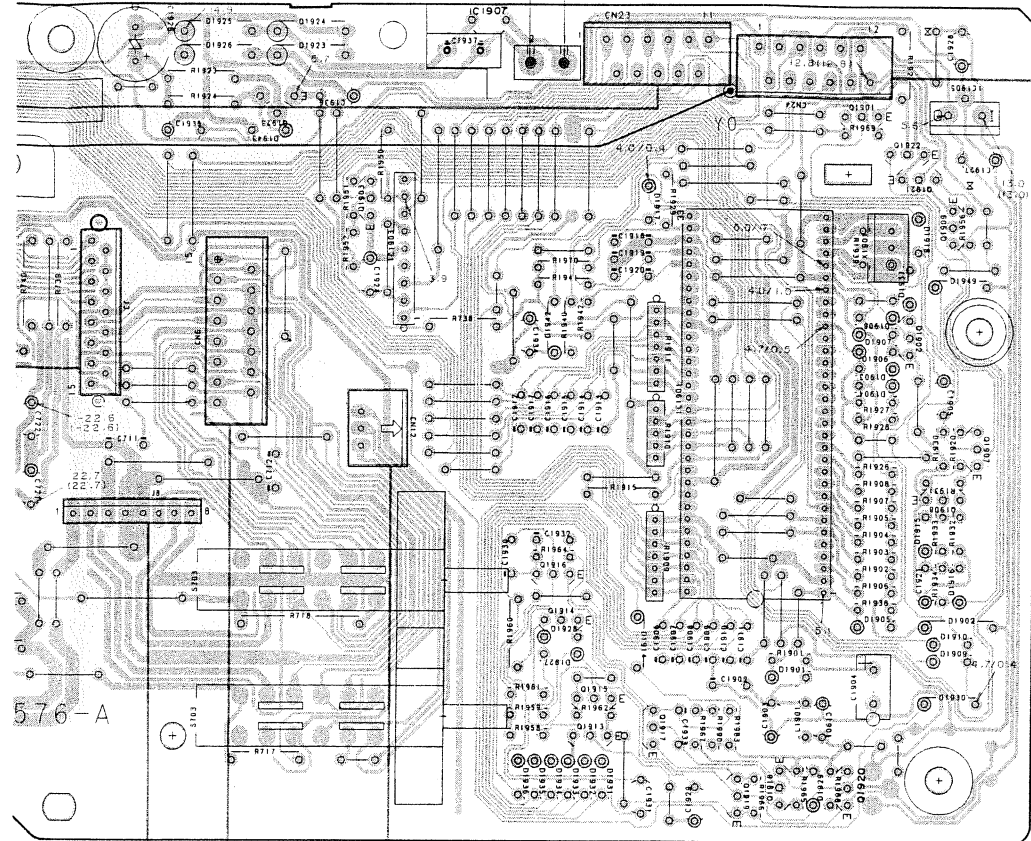
A

B

C

D

R ASSY
122



IC1907
IC1904 Q1904
IC1902
Q1923 IC1905 Q1901

Q1922

Q1921
Q1903 Q1909
IC1903

Q1902

IC1901

Q1907

Q1908

Q702
Q704 Q1916

Q703 Q1914

Q701
Q1915 IC1904

Q1913 Q1917
Q1918 Q1920
Q1919

NOTE

1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
		Transistor
		Radiator type transistor
		Diode
		Resistor
		Capacitor (Polarity)
		Capacitor (Non-polarity)

Others

P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

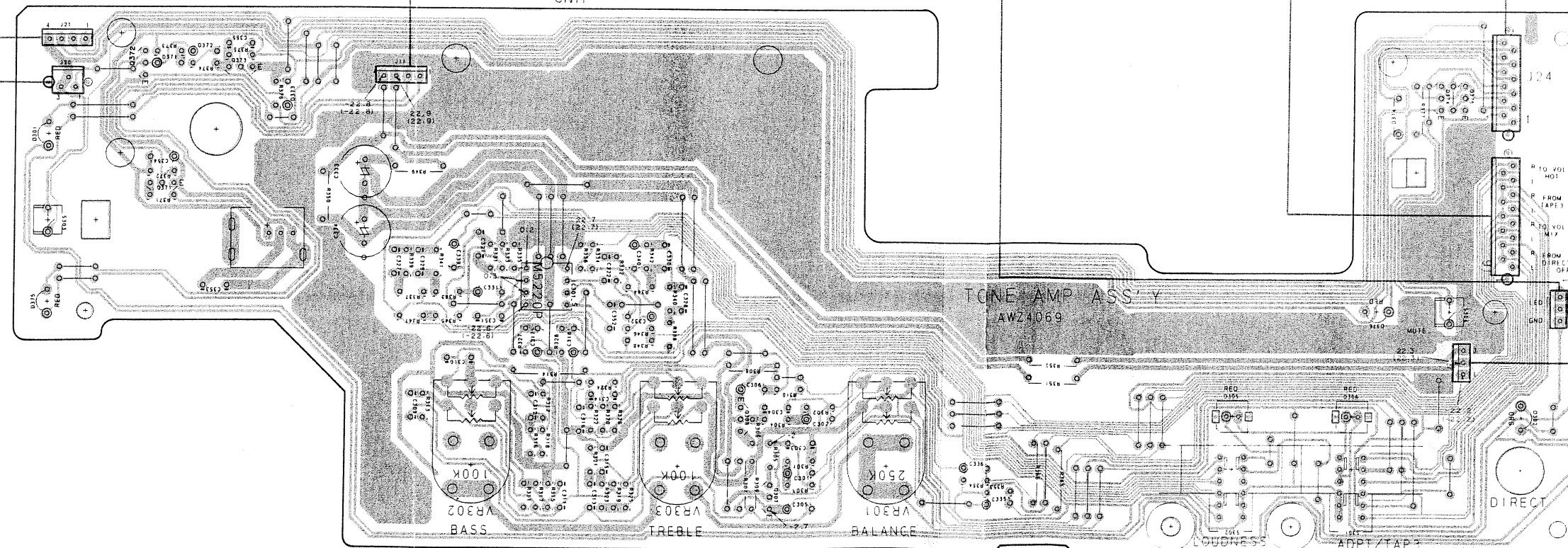
3. The capacitor terminal marked with (double circles) shows negative terminal.
4. The diode terminal marked with (double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.

TO VR ASSY
CN8

TONE AMP ASSY (AWZ4069)

TO POWER SUPPLY ASSY
CN11

TO SUB
TRANS
ASSY
CN21



Q372
Q373
Q374
Q375

Q371

IC301

VR301
VR302 Q308
VR303

Q307

TO PHONO AMP ASSY
CN2

A

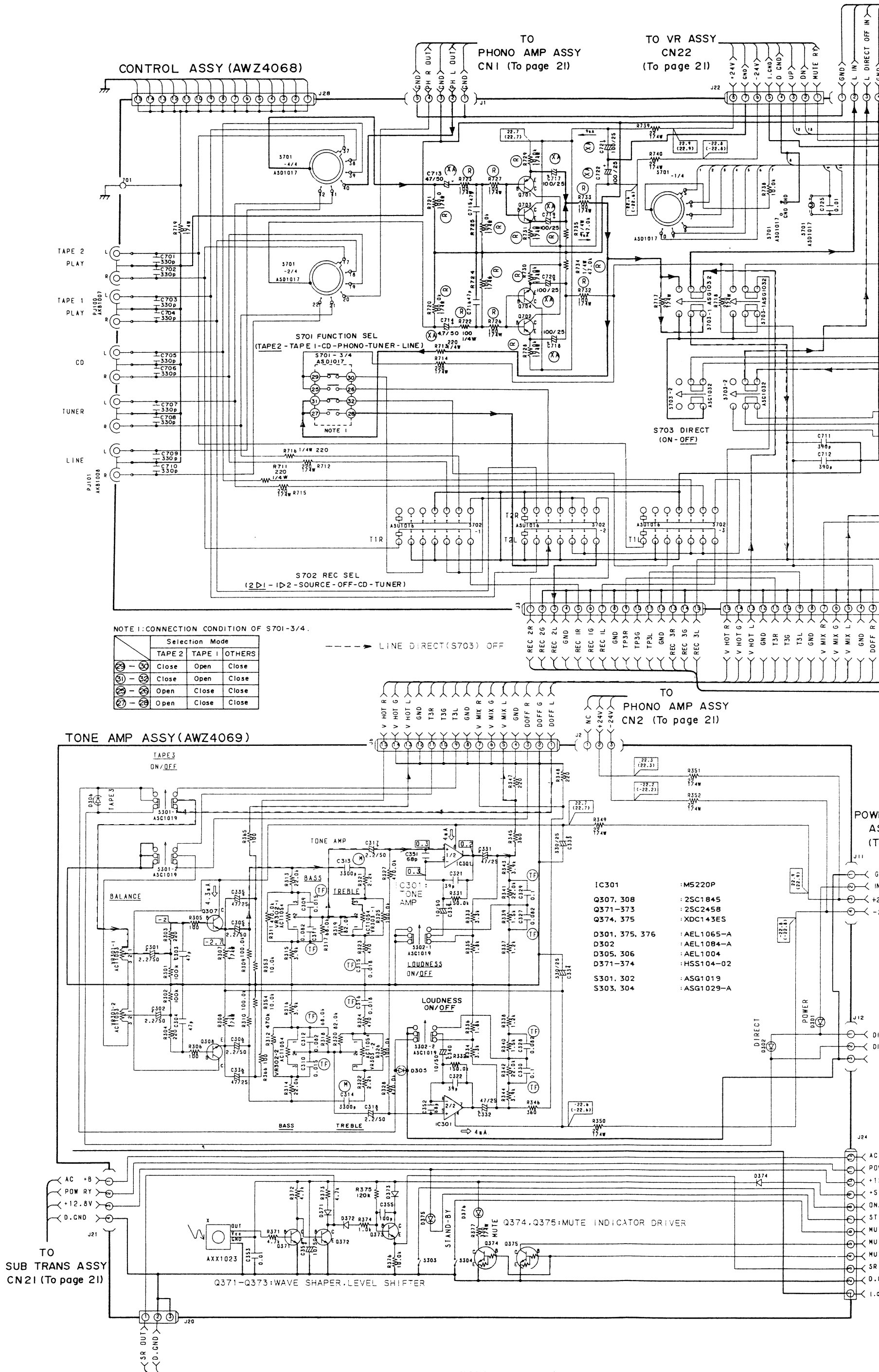
B

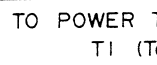
C

D

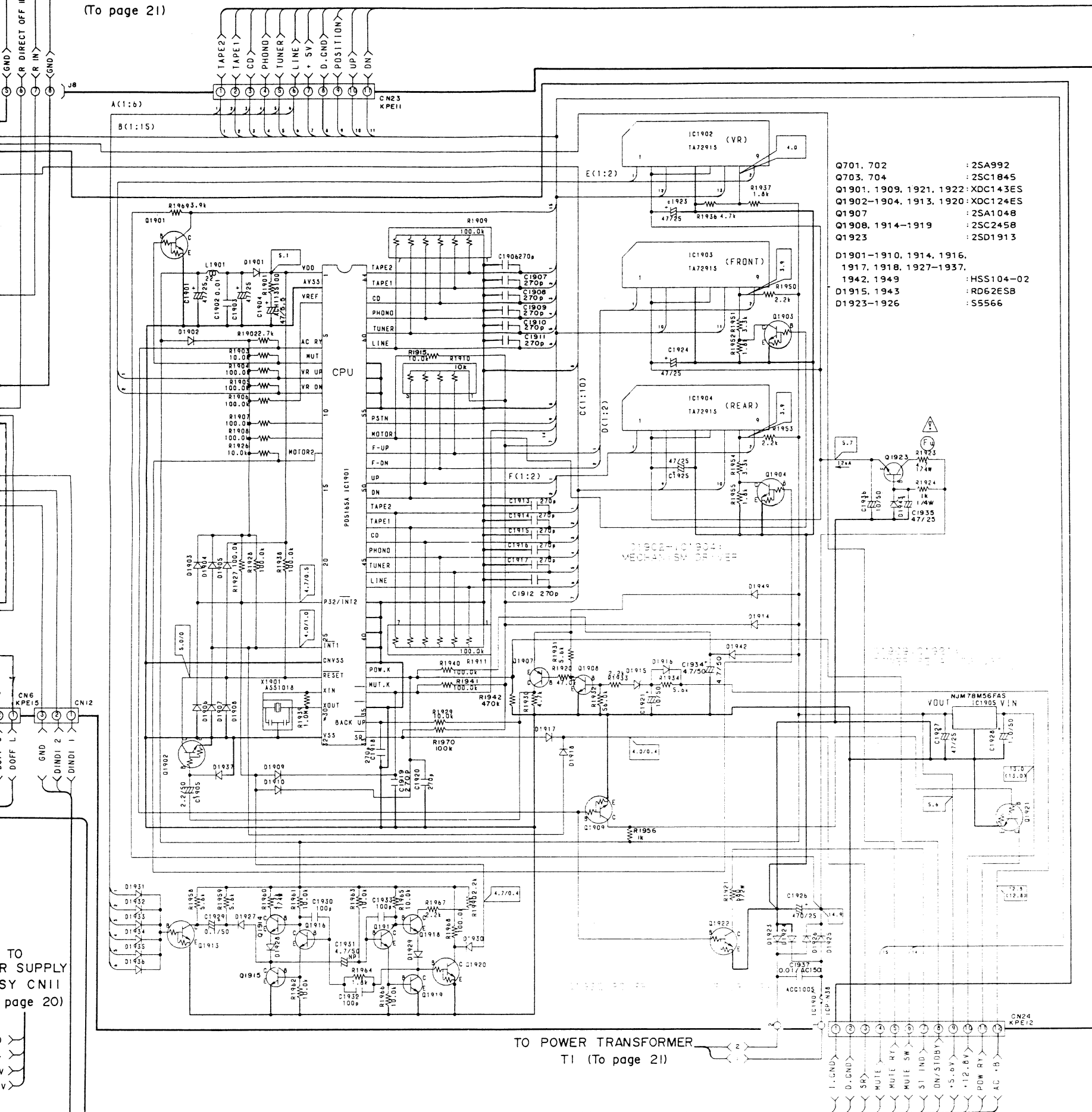
E

F





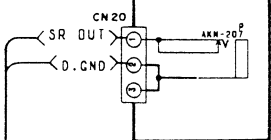
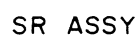
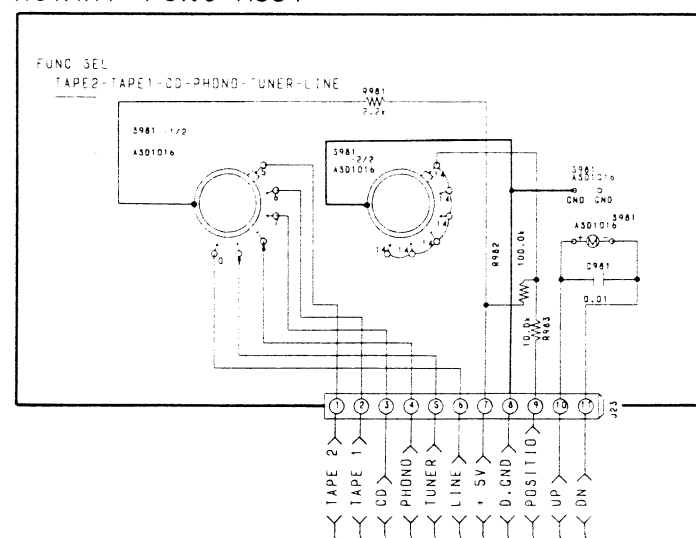
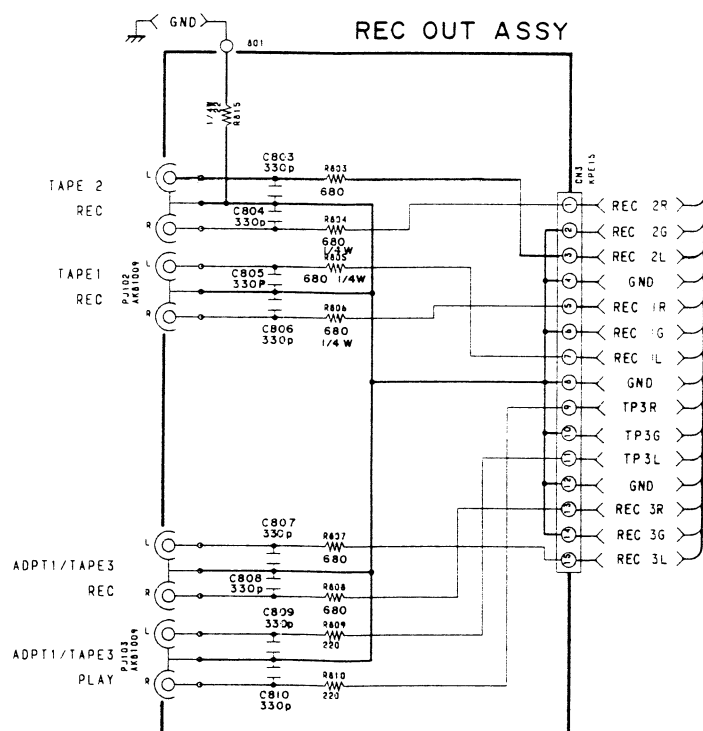
TO VR ASSY
CN8
(To page 21)



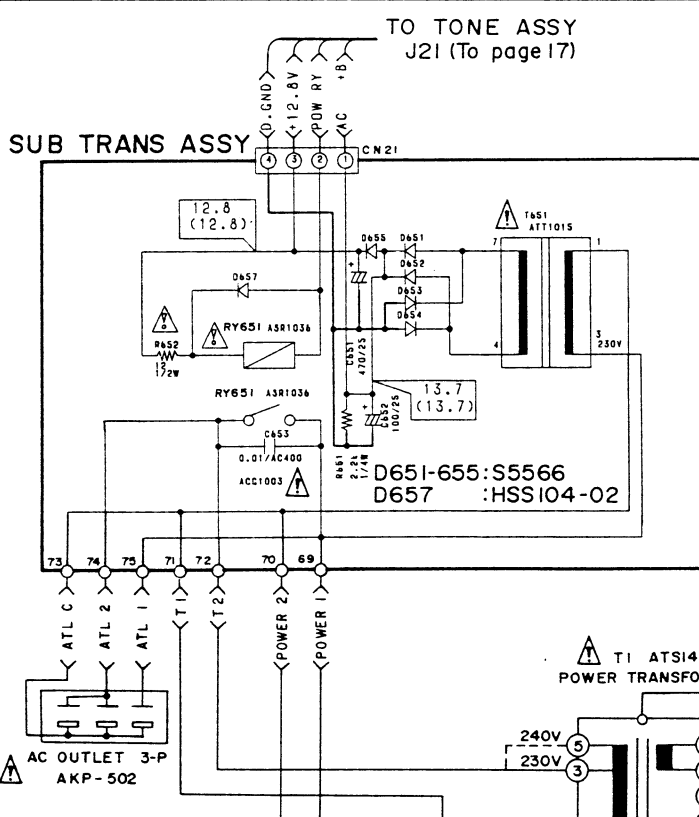
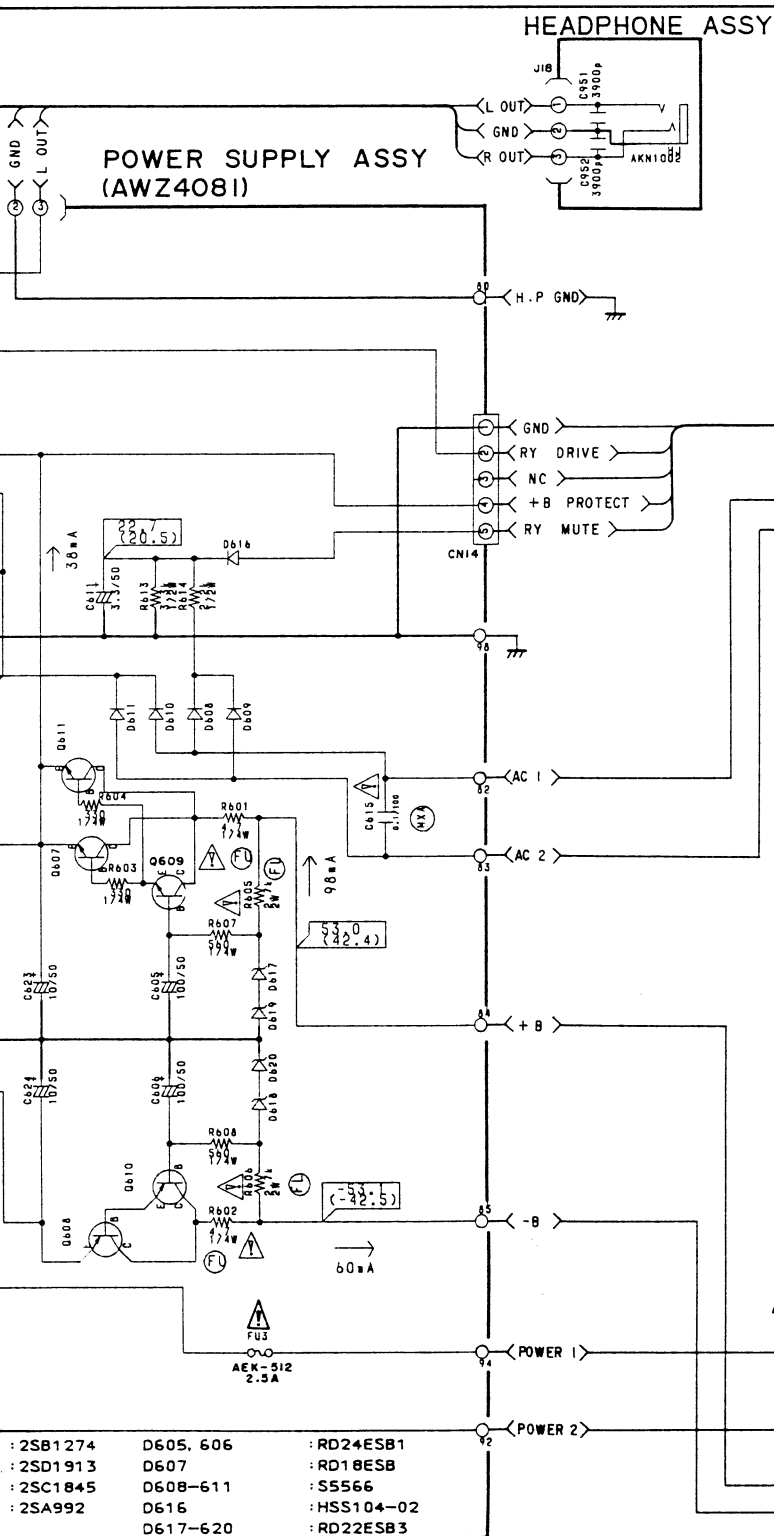
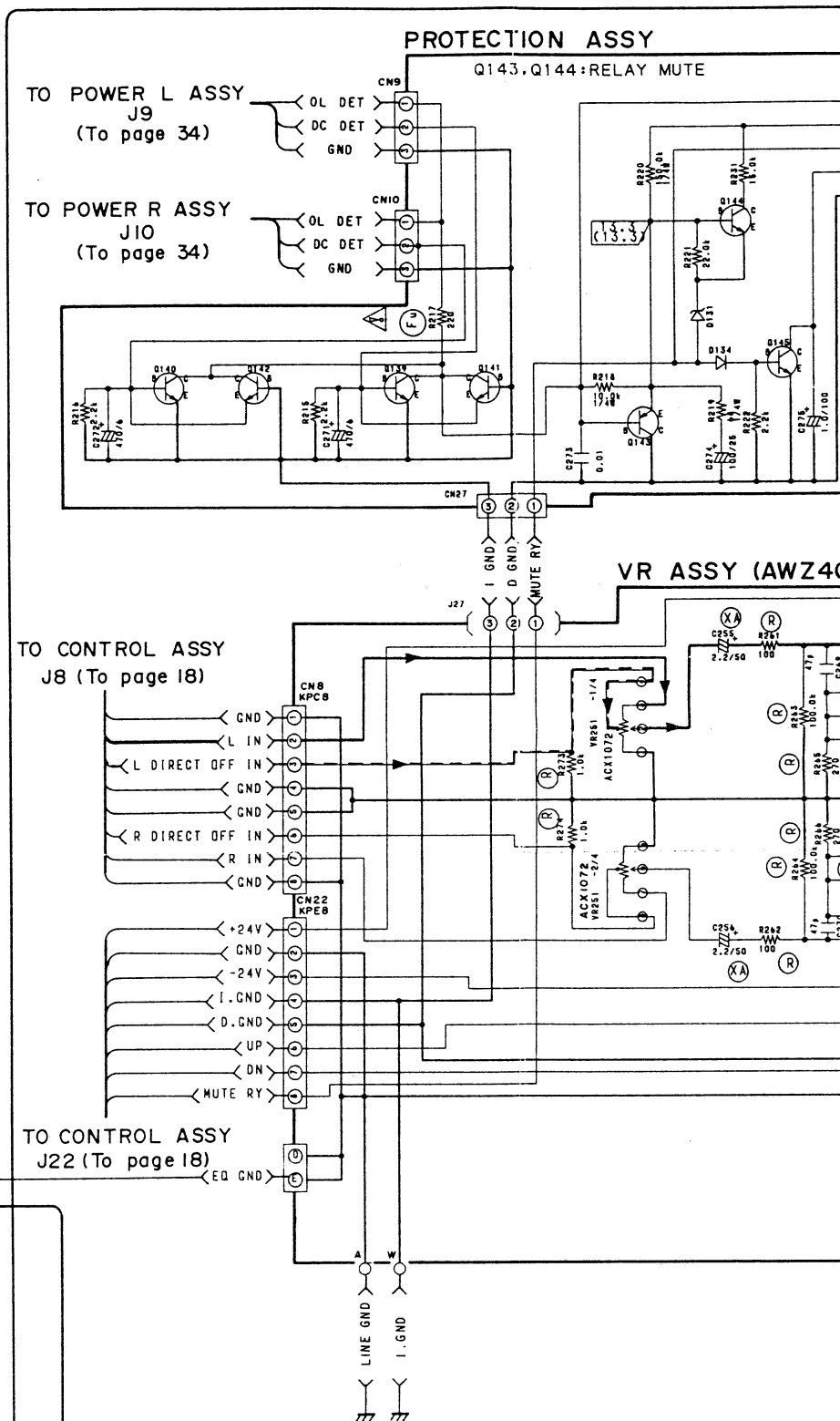
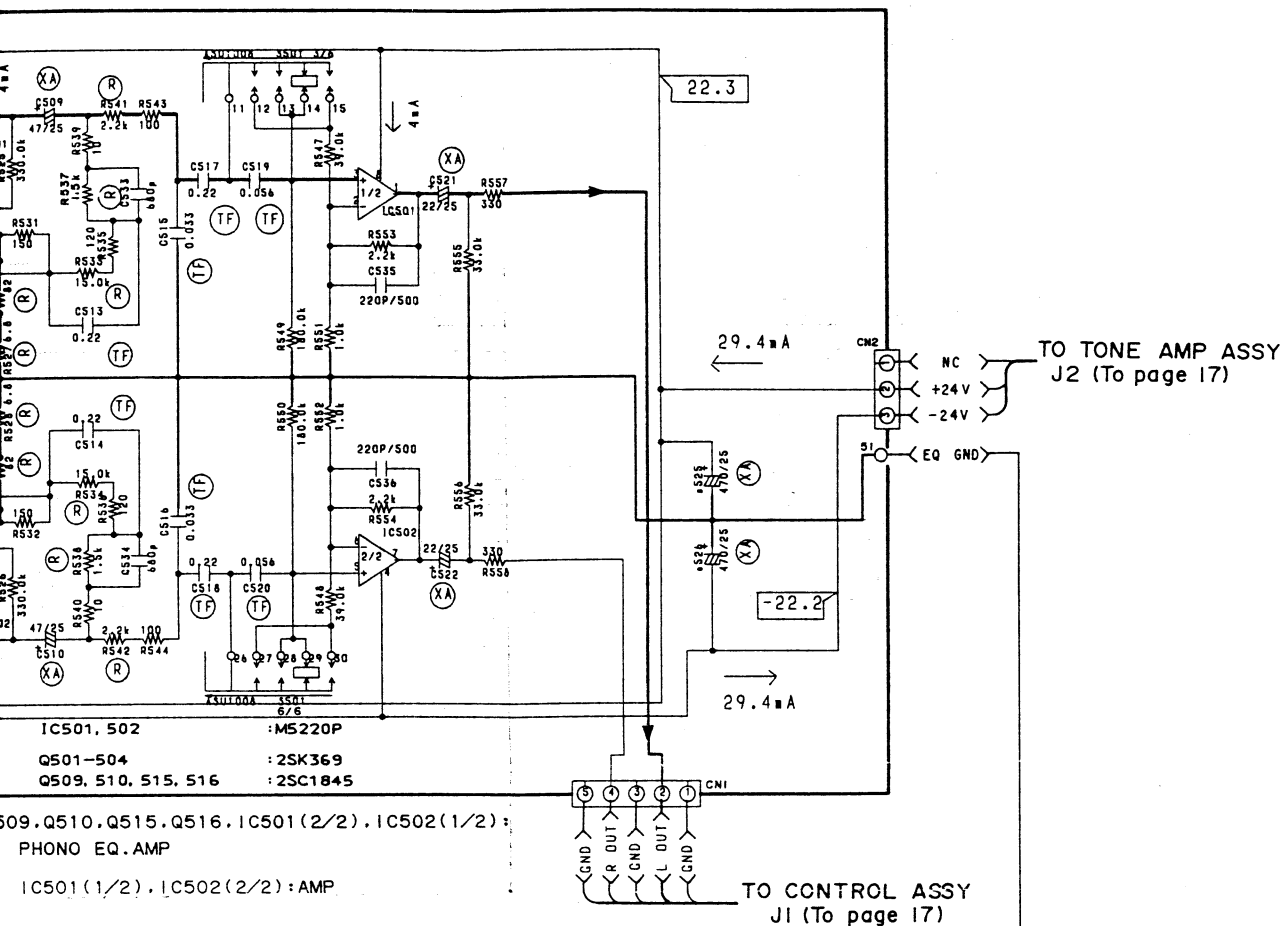
Q701, 702	: 2SA992
Q703, 704	: XDC184S
Q1901, 1909, 1921, 1922	: XDC143ES
Q1902-1904, 1913, 1920	: XDC124ES
Q1907	: 2SA1048
Q1908, 1914-1919	: 2SC2458
Q1923	: 2SD1913
D1901-1910, 1914, 1916, 1917, 1918, 1927-1937, 1942, 1949	: HSS104-0
D1915, 1943	: RD62ESB
D1923-1926	: 5S566

TO
R SUPPLY
SY CNII
page 20)

TO POWER TRANSFORMER
T1 (To page 21)



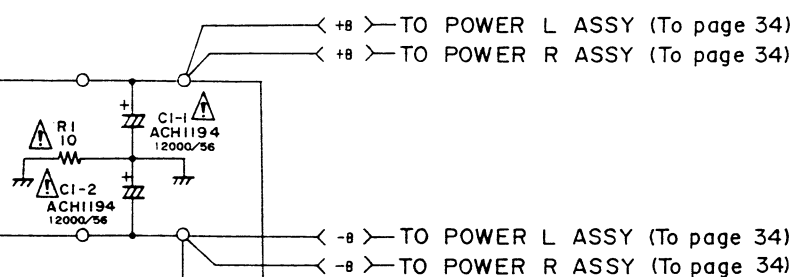
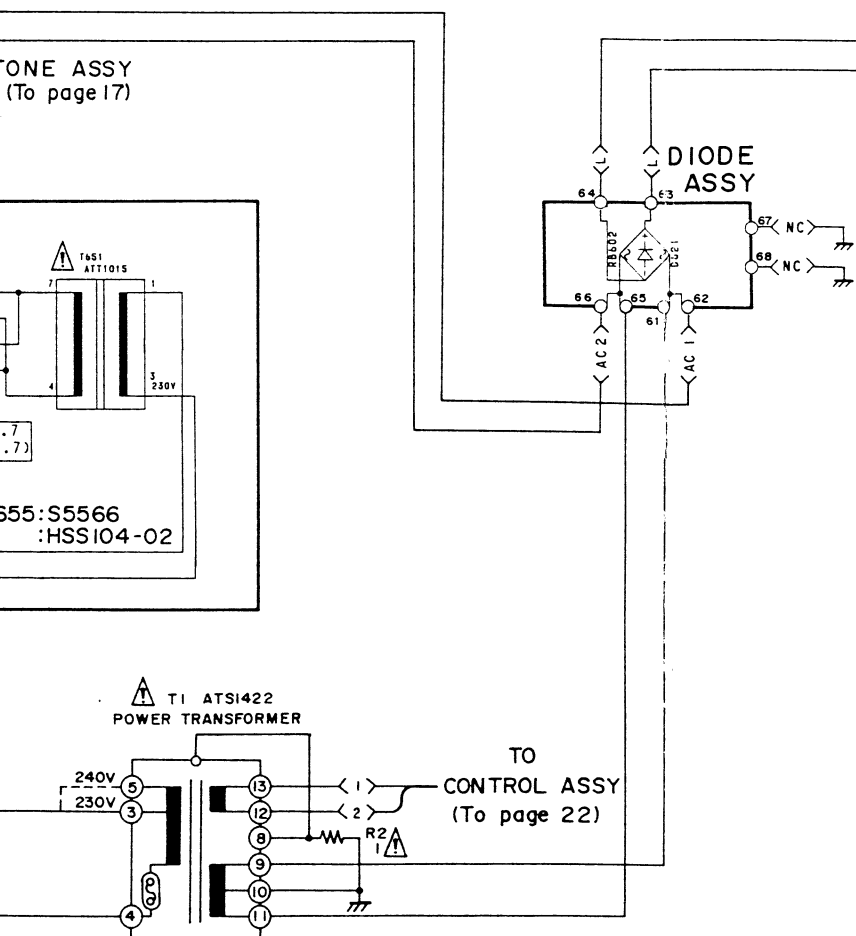
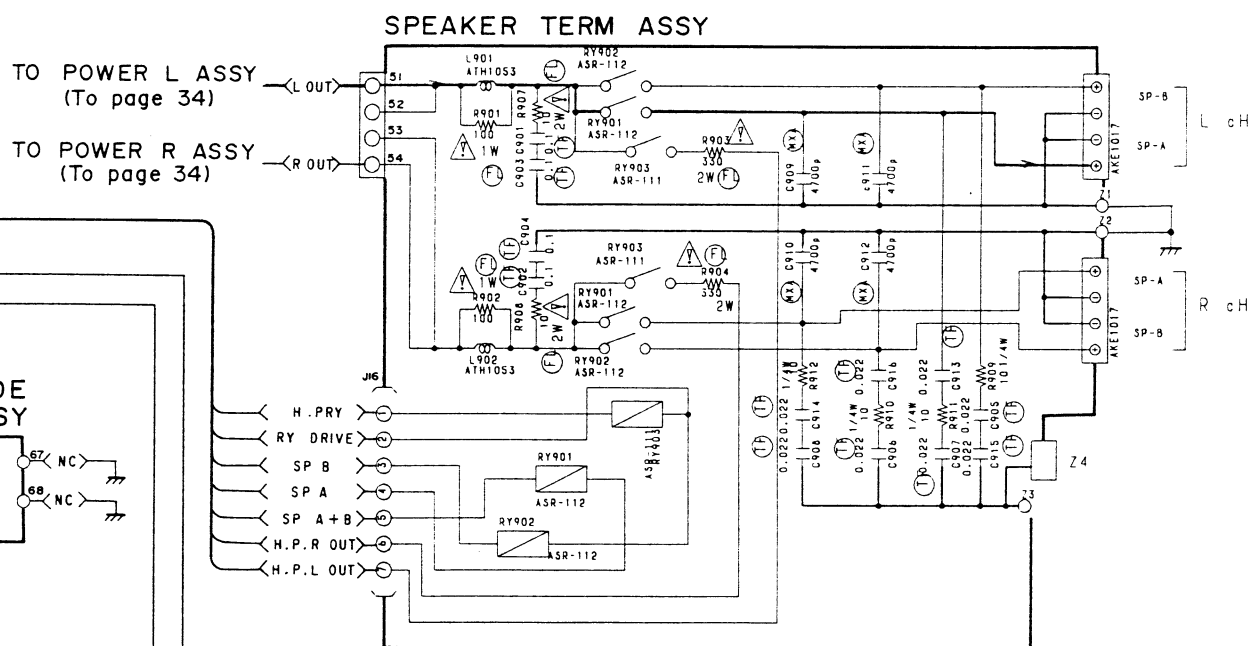
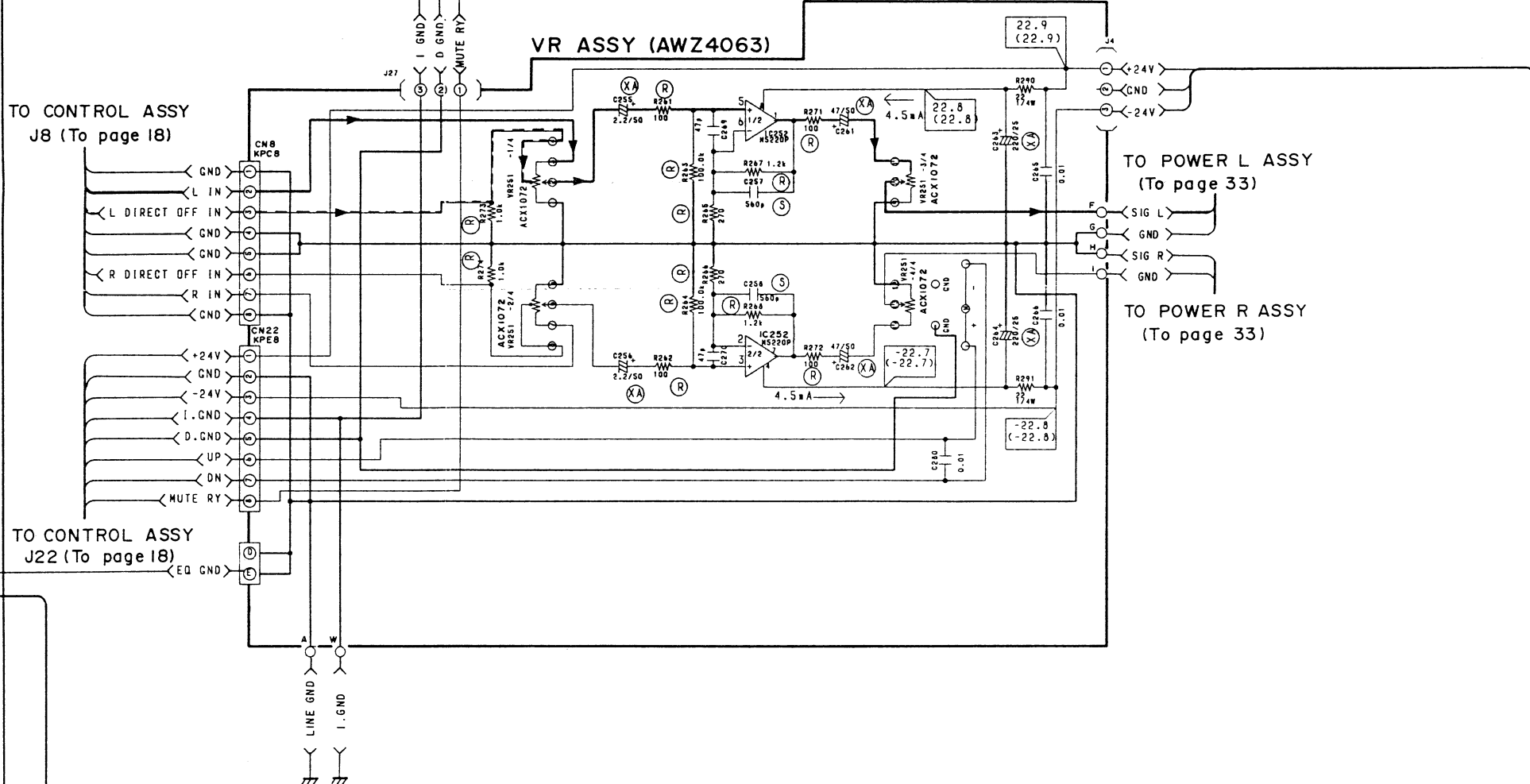
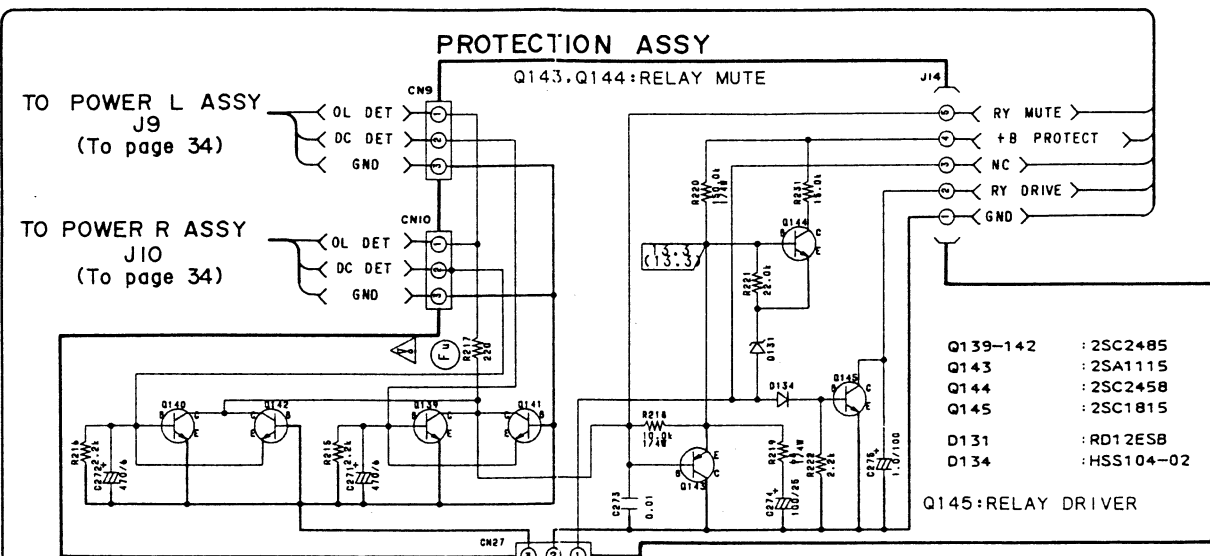


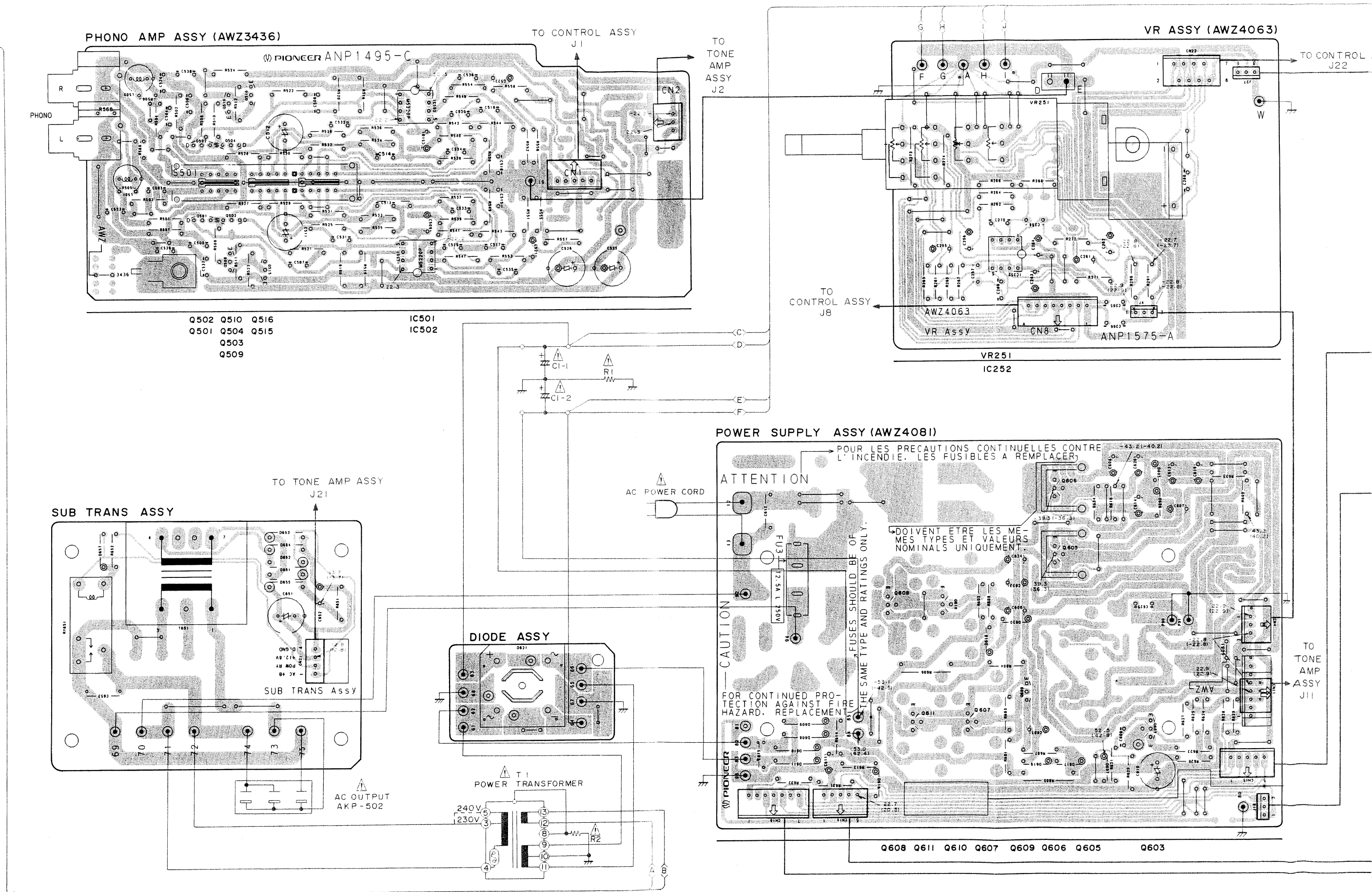


ASSY
7)

ONE ASSY
(To page 17)

555:S5566
:HSS104-02





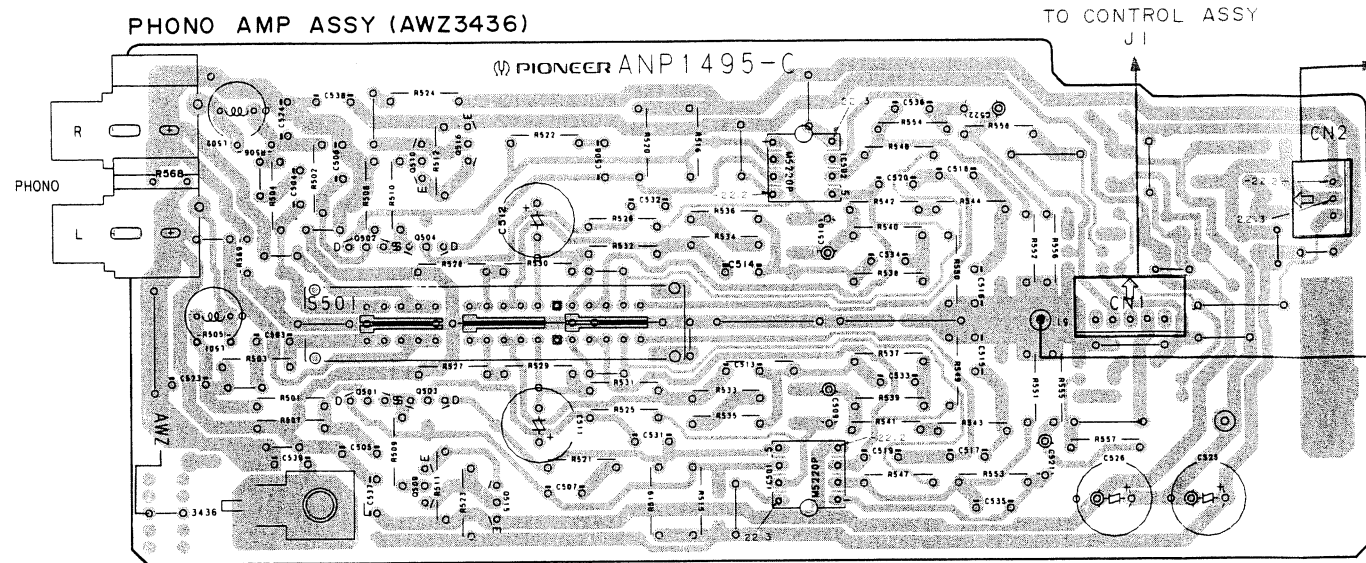
Line Voltage Selection

Line voltage can be changed with the following steps.

1. Disconnect the AC power cord.
2. Remove the top cover.
3. Change the connection of the power transformer lead wire.

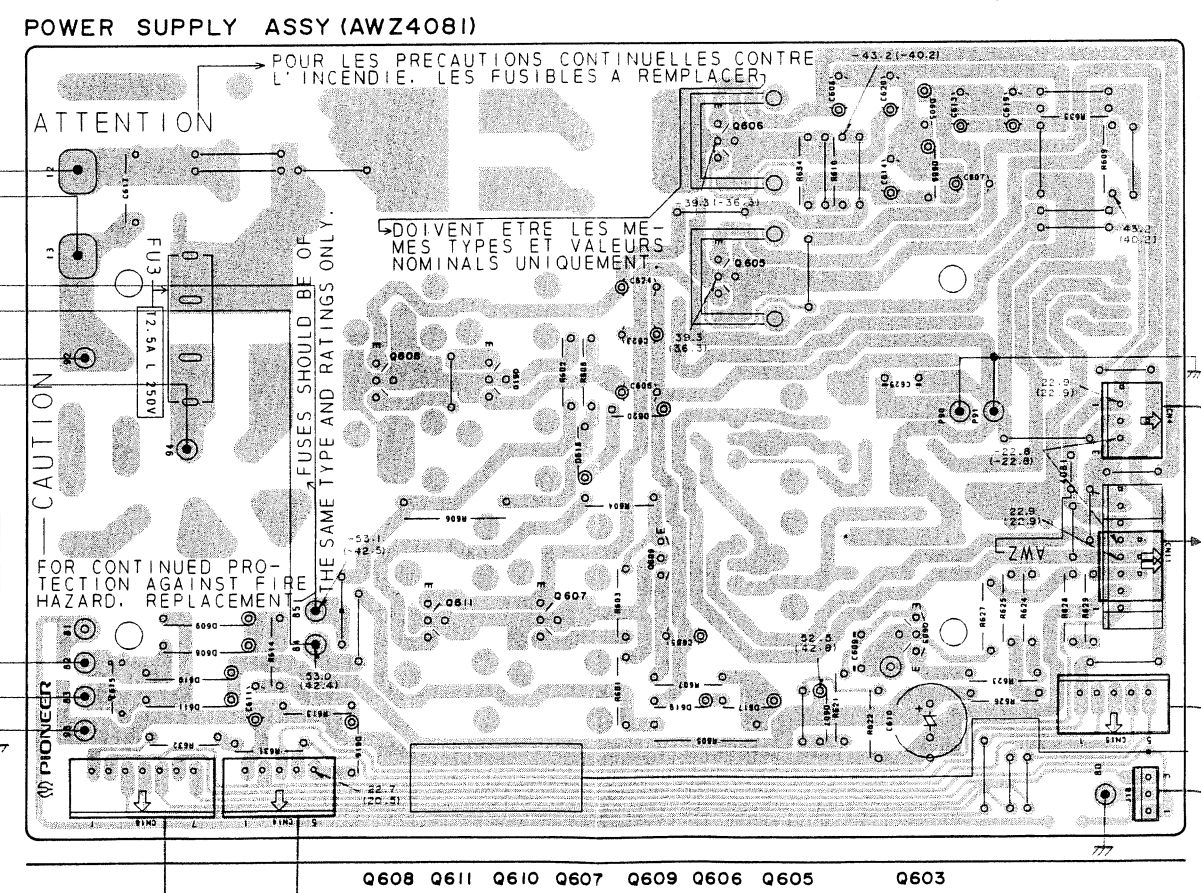
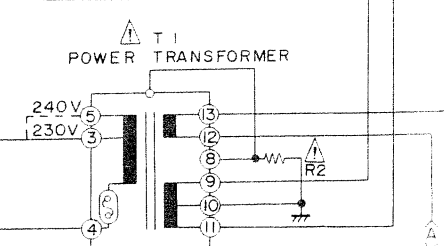
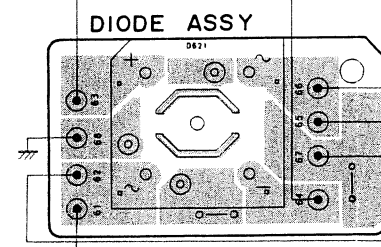
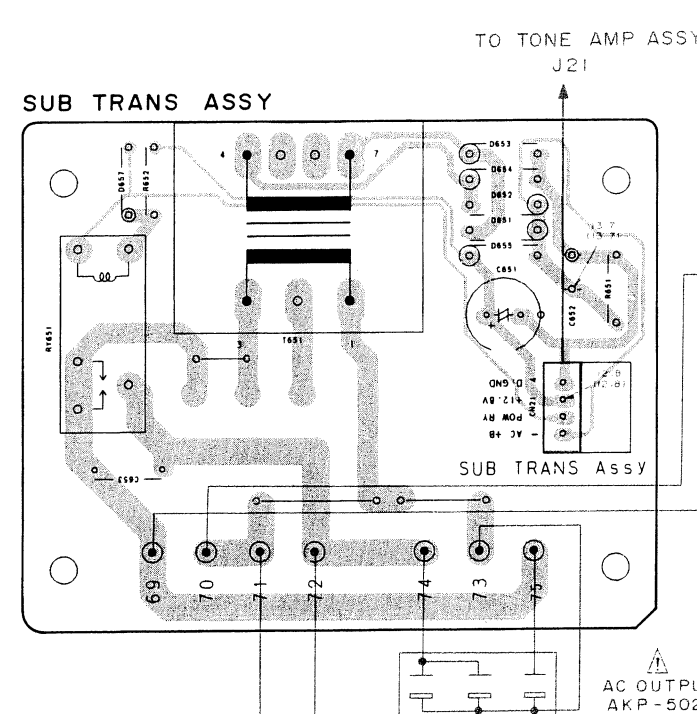
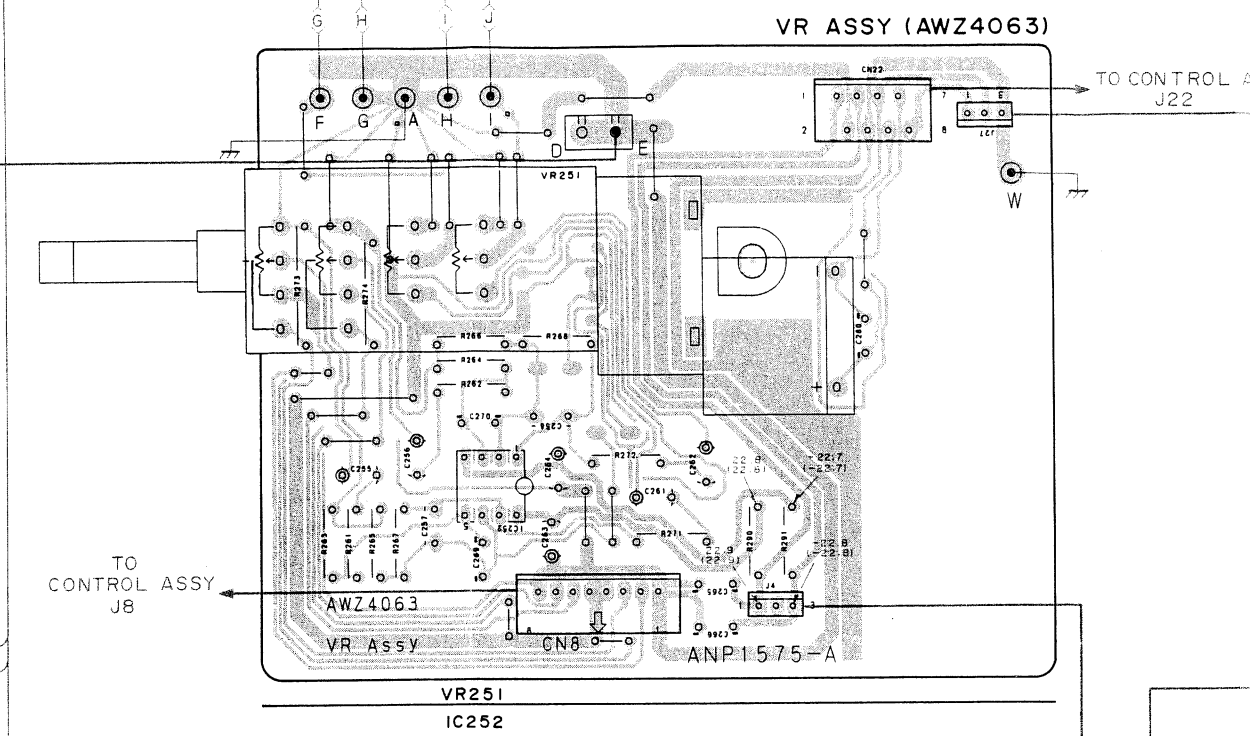
4. Stick the line voltage label on the rear panel.

Part No.	Description	
AAX - 193	220 V label	----- 220 V - 230 V
AAX - 192	240 V label	————— 240 V



Q502 Q510 Q516
Q501 Q504 Q515
Q503
Q509

IC501
IC502

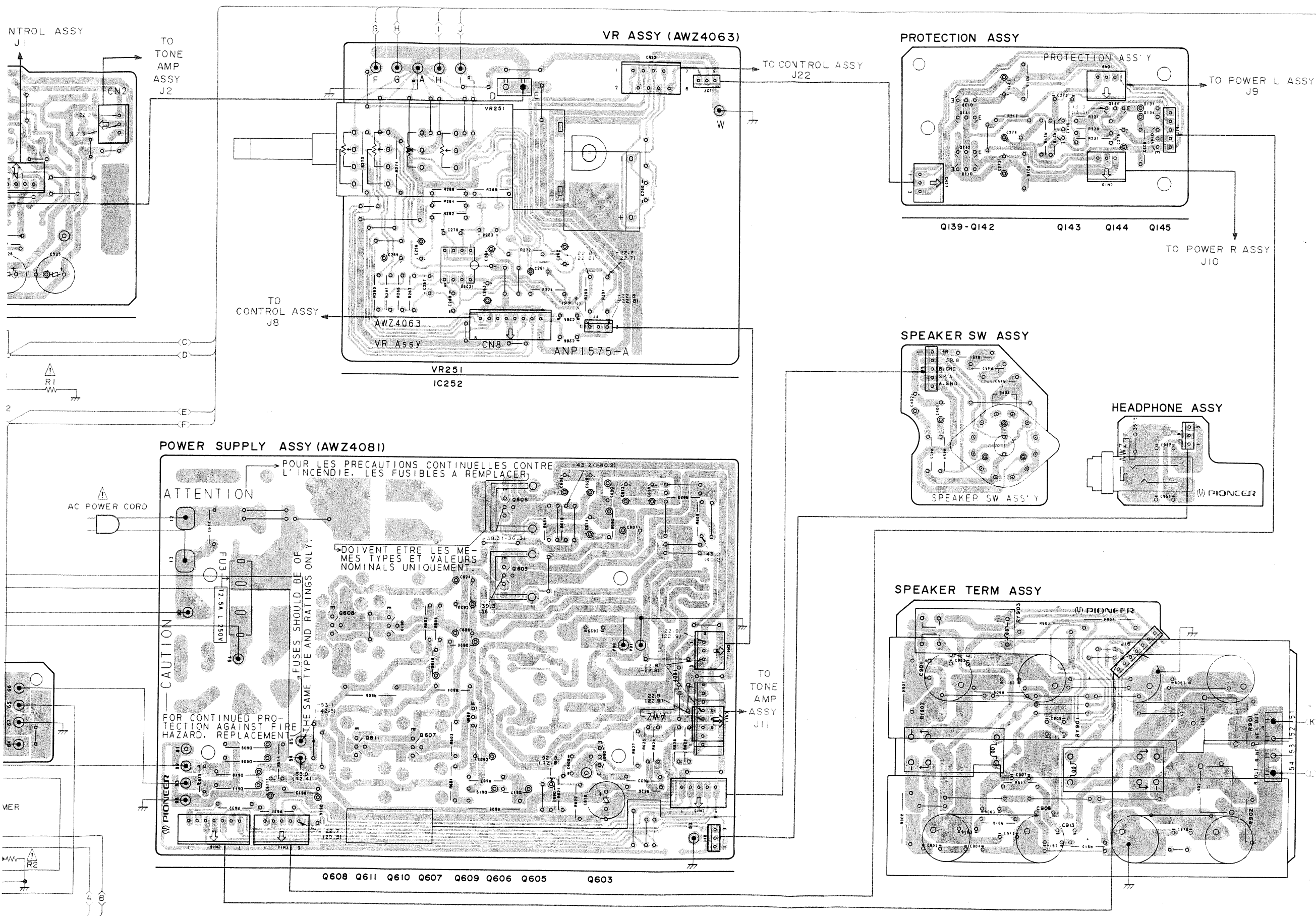


Line Voltage Selection
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4. Stick the line voltage label on the rear panel.

Part No.	Description	
AAX - 193	220 V label	----- 220 V - 230 V
AAX - 192	240 V label	————— 240 V



A

B

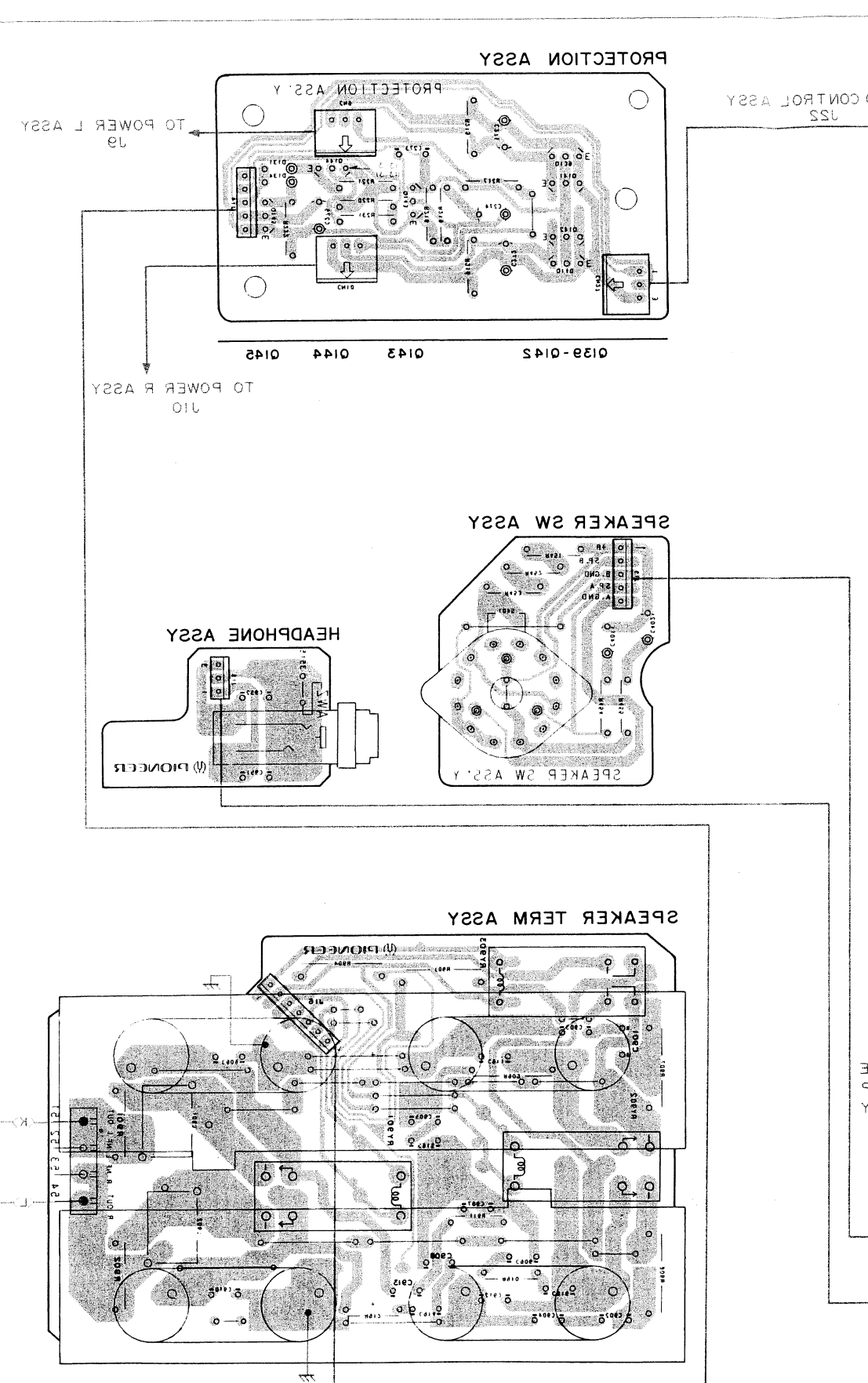
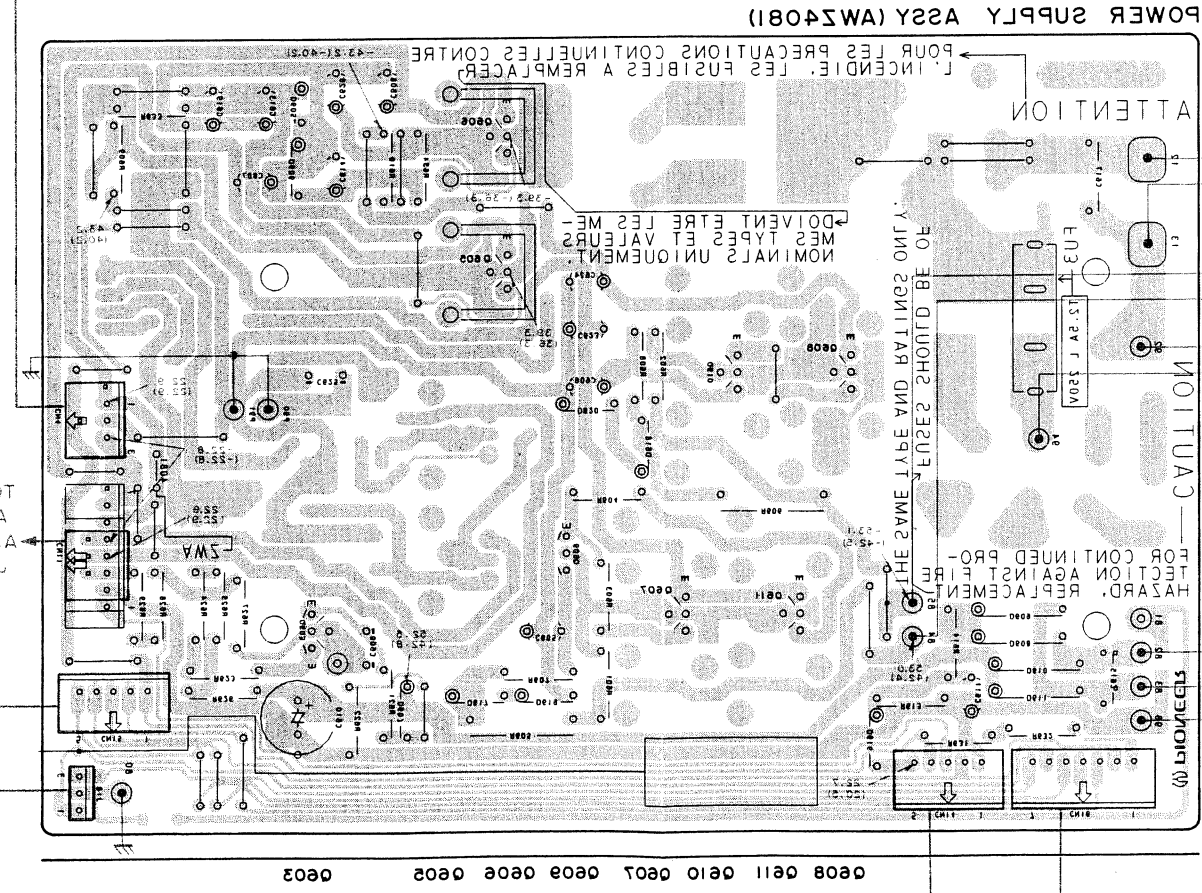
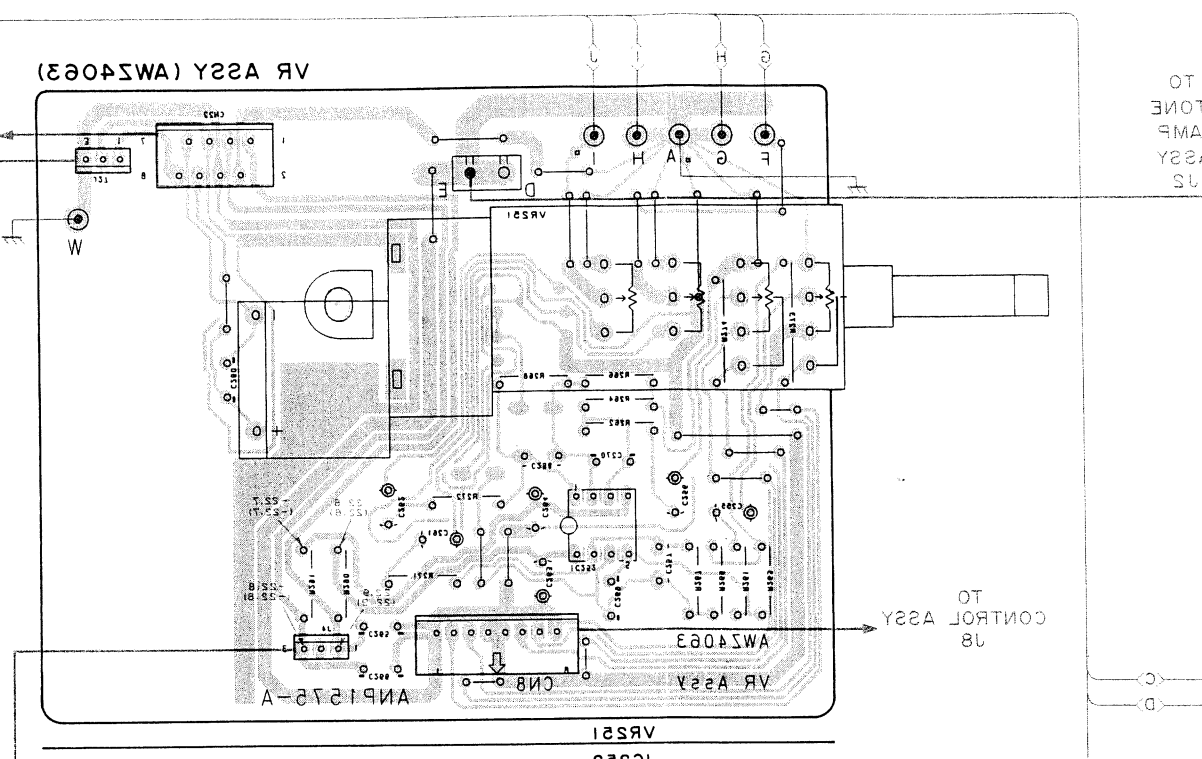
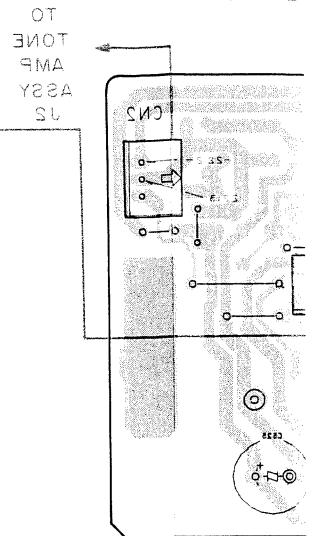
C

D

panel.

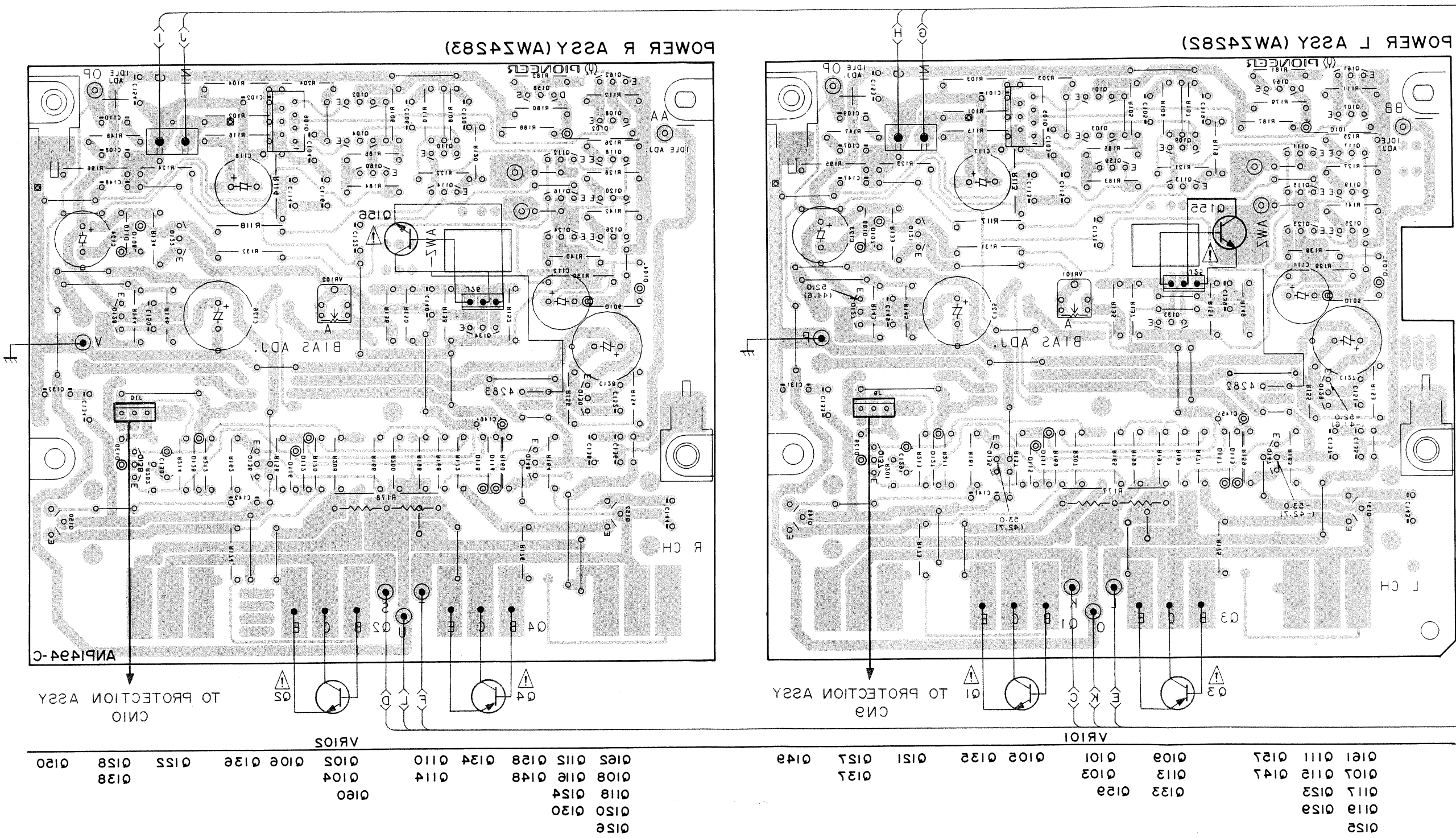
220 V - 230 V
240 V

R5



5.4 POWER L AND POWER R ASSEMBLIES

This P.C.B. connection diagram is viewed from the foil side.



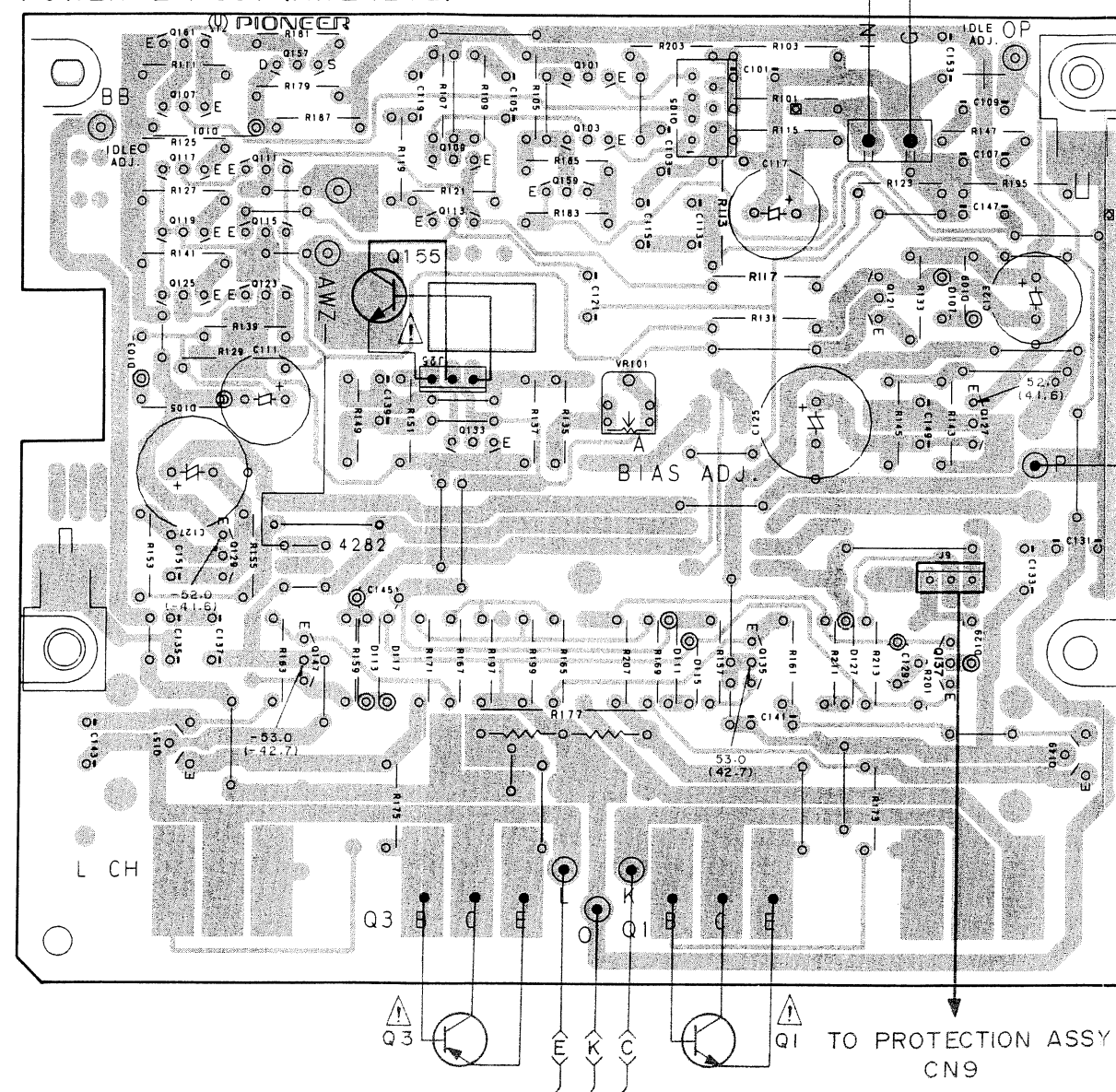
2.4 POWER L AND POWER R ASSEMBLIES

A

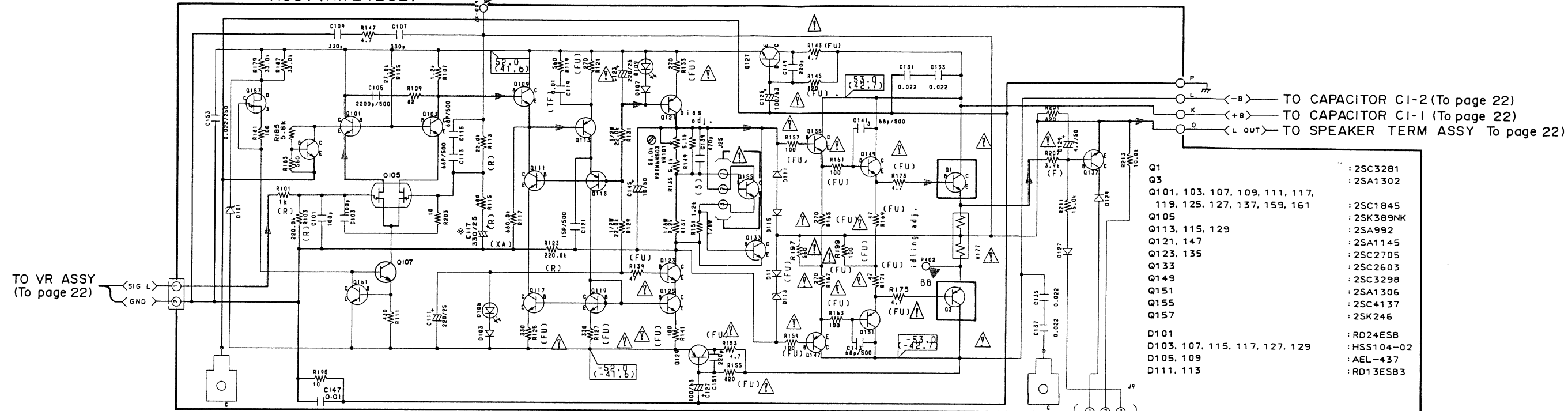
A

2

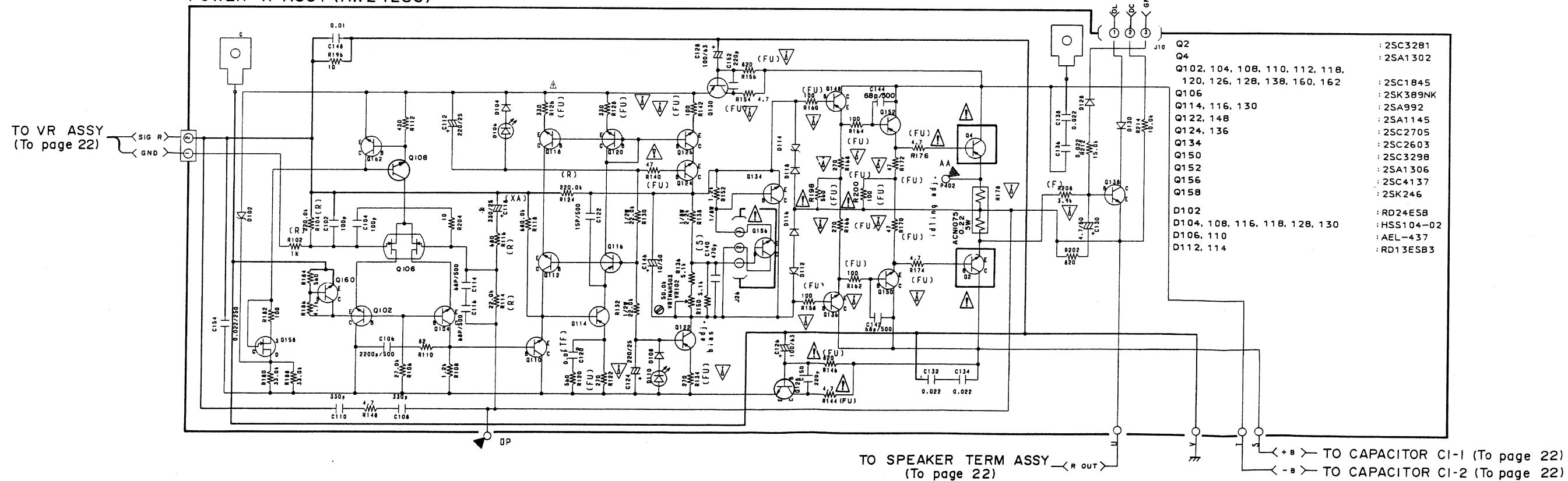
POWER L ASSY (AWZ4282)



POWER L ASSY (AWZ4282)



POWER R ASSY (AWZ4283)



3. PCB PARTS LIST

- NOTES:
- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
 - The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
 - Parts marked by "●" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
 - When ordering resistors, first convert resistance values into code form as shown in the following examples.
- Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).
- 560Ω → 56 × 10¹ → 561 RD1/8PM $\begin{bmatrix} 5 & 6 & 1 \end{bmatrix}$ J
- 47kΩ → 47 × 10³ → 473 RD1/4PS $\begin{bmatrix} 4 & 7 & 3 \end{bmatrix}$ J
- 0.5Ω → 0R5 RN2H $\begin{bmatrix} 0 & R & 5 \end{bmatrix}$ K
- 1Ω → 010 RS1P $\begin{bmatrix} 0 & 1 & 0 \end{bmatrix}$ K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ → 562 × 10¹ → 5621 RN1/4PC $\begin{bmatrix} 5 & 6 & 2 & 1 \end{bmatrix}$ F

Mark No.	Description	Parts No.	Mark No.	Description	Parts No.
LIST OF ASSEMBLIES					
●	CONTROL ASSY	AWZ4068	D1923-1926	DIODE	S5566
●	TONE AMP ASSY	AWZ4069	D1927-1937	DIODE	HSS104-02
NSP	SPEAKER SW ASSY	AWZ4070	D1942	DIODE	HSS104-02
			D1943	ZENER DIODE	RD6.2ESB
			D1949	DIODE	HSS104-02
●	PHONO AMP ASSY	AWZ3436	SWITCHES		
NSP	HEADPHONE ASSY	AWZ3515	S701	SWITCH	ASD1017
●	POWER SUPPLY ASSY	AWZ4081	S702	SWITCH	ASU1016
NSP	SPEAKER TERM ASSY	AWZ4230	S703	PUSH SWITCH	ASG1032
NSP	DIODE ASSY	AWZ4392	COIL		
●	VR ASSY	AWZ4063	L1901	AXIAL INDUCTOR	LAU220K
NSP	REC OUT ASSY	AWZ4064	CAPACITORS		
NSP	ROTARY FUNC ASSY	AWZ4065	C701-704	CERAMIC CAPACITOR	CKCYB331K50
NSP	SR ASSY	AWZ4066	C705,706	CERAMIC CAPACITOR	CKCYB331K500
NSP	SUBTRANS ASSY	AWZ4067	C707-710	CERAMIC CAPACITOR	CKCYB331K50
NSP	PROTECTION ASSY	AWZ4277	C711,712	CERAMIC CAPACITOR	CKCYB391K50
			C713,714	ELECTROLYTIC CAPACIT	CEXA4R7M50
●	POWER L ASSY	AWZ4282	C715,716	CERAMIC CAPACITOR	CCCSL470J50
●	POWER R ASSY	AWZ4283	C717-722	ELECTROLYTIC CAPACIT	CEXA101M25
			C725	CERAMIC CAPACITOR	CKCYF103Z50
CONTROL ASSY			C1901	ELECT. CAPACITOR	CEAS470M25
SEMICONDUCTORS			C1902	CERAMIC CAPACITOR	CKCYF103Z50
IC1901	SYSTEM CONTROL MPU	PD5165A	C1903	ELECT. CAPACITOR	CEAS470M25
IC1902-1904	MECHANISM DRIVER IC	TA7291S	C1904	CAPACITOR(4.7/5.5)	ACH1135
IC1905	REGULATOR IC	NJM78M56FAS	C1905	ELECT. CAPACITOR	CEAS2R2M50
IC1907	IC PROTECTOR	ICP-N38	C1906-1920	CERAMIC CAPACITOR	CKMYB271K50
Q701,702	TRANSISTOR	2SA992	C1921	ELECT. CAPACITOR	CEAS100M50
Q703,704	TRANSISTOR	2SC1845	C1923-1925	ELECT. CAPACITOR	CEAS470M25
Q1901	TRANSISTOR	XDC143ES	C1926	ELECT. CAPACITOR	CEAS471M25
Q1902-1904	TRANSISTOR	XDC124ES	C1927	ELECT. CAPACITOR	CEAS470M25
Q1907	TRANSISTOR	2SA1048	C1928	ELECT. CAPACITOR	CEAS010M50
Q1908	TRANSISTOR	2SC2458	C1929	ELECT. CAPACITOR	CEAS0R1M50
Q1909	TRANSISTOR	XDC143ES	C1930	CERAMIC CAPACITOR	CCMSL101J50
Q1913	TRANSISTOR	XDC124ES	C1931	ELECT. CAPACITOR	CEANP4R7M50
Q1914-1919	TRANSISTOR	2SC2458	C1932,1933	CERAMIC CAPACITOR	CCMSL101J50
Q1920	TRANSISTOR	XDC124ES	C1934	ELECT. CAPACITOR	CEJA4R7M50
Q1921,1922	TRANSISTOR	XDC143ES	C1935	ELECT. CAPACITOR	CEAS470M25
Q1923	TRANSISTOR	2SD1913	C1936	ELECT. CAPACITOR	CEAS100M50
D1901-1910	DIODE	HSS104-02	C1937	CKA (0.01/AC150V)	ACG1005
D1914	DIODE	HSS104-02			
D1915	ZENER DIODE	RD6.2ESB			
D1916-1918	DIODE	HSS104-02			

Mark No.	Description	Parts No.	Mark No.	Description	Parts No.
RESISTORS					
R711-718	CARBON FILM RESISTOR	RD1/4PM221J	C351,352	CERAMIC CAPACITOR	CCCSL680J50
R719	CARBON FILM RESISTOR	RD1/4PM100J	C353	CERAMIC CAPACITOR	CKCYF103Z50
R720,721	CARBON FILM RESISTOR	RDR1/4PM104J	C354	ELECT. CAPACITOR	CEAS100M50
R722,723	CARBON FILM RESISTOR	RDR1/4PM101J	C355	CERAMIC CAPACITOR	CCCSL101J50
R724,725	CARBON FILM RESISTOR	RDR1/4PM104J	RESISTORS		
R726,727	CARBON FILM RESISTOR	RDR1/4PM101J	VR301	VARIABLE RESISTOR	ACT1053
R728-731	CARBON FILM RESISTOR	RDR1/4PM103J	VR302,303	VARIABLE RESISTOR	ACT1054
R732,733	CARBON FILM RESISTOR	RDR1/4PM101J	R307,308	CARBON FILM RESISTOR	RD1/4PM472J
R734,735	CARBON FILM RESISTOR	RDR1/4PM473J	R349-352	CARBON FILM RESISTOR	RD1/4PM220J
R739,740	CARBON FILM RESISTOR	RD1/4PM220J	R377	CARBON FILM RESISTOR	RD1/4PM331J
R1909	RESISTOR ARRAY(100K)	RA6T104J	OTHER		
R1910	RESISTOR ARRAY (10K)	RA4T104J	REMOTE RECEIVER UNIT		
R1911	RESISTOR ARRAY(100K)	RA6T104J			
R1921	CARBONFILM RESISTOR	RD1/2PM681J			
△ R1923	FUSIBLE RESISTOR	RFA1/4PS4R7J			
R1924	CARBON FILM RESISTOR	RD1/4PM102J	SPEAKER SW ASSY		
R1960	CARBON FILM RESISTOR	RD1/4PM472J	SWITCH		
	Other resistors	RD1/8PM $\begin{bmatrix} \square & \square & \square & \square \end{bmatrix}$ J	S401	SWITCH	ASD1003
OTHERS			CAPACITORS		
X1901	CERAMIC RESO.(4.19MH _z)	ASS1018	C401,402	ELECT. CAPACITOR	CEAS3R3M50
CN6	CONNECTOR(15P)	KPE15	RESISTORS		
CN23	CONNECTOR(11P)	KPE11	R451-453	CARBON FILM RESISTOR	RD1/4PM271J
CN24	CONNECTOR(12P)	KPE12	R454,455	CARBON FILM RESISTOR	RD1/4PM561J
	PIN JACK(4P)	AKB1007			
	PIN JACK(6P)	AKB1008			
TONE AMP ASSY					
SEMICONDUCTORS					
IC301	OP-AMP-IC	M5220P	PHONO AMP ASSY		
Q307,308	TRANSISTOR	2SC1845	SEMICONDUCTORS		
Q371-373	TRANSISTOR	2SC2458	IC501,502	OP-AMP-IC	M5220P
Q374,375	TRANSISTOR	XDC143ES	Q501-504	N-FET	2SK369
D301	LED(RED)	AEL1065	Q509,510	TRANSISTOR	2SC1845
			Q515,516	TRANSISTOR	2SC1845
D302	LED	AEL1084	SWITCH		
D305,306	LED(RED)	AEL1004	S501	SWITCH	ASU1008
D371-374	DIODE	HSS104-02	COILS		
D375,376	LED(RED)	AEL1065	L501,502	COIL(270μH)	ATH1010
SWITCHES			CAPACITORS		
S301,302	PUSH SWITCH	ASG1019	C503,504	AUDIO FILM CAPACITOR	CFTXA103J50
S303,304	SWITCH	ASG1029	C505,506	CERAMIC CAPACITOR	CCCSL181K500
CAPACITORS			C507,508	CERAMIC CAPACITOR	CKCYB222K500
C301,302	ELECT. CAPACITOR	CEAS2R2M50	C509,510	ELECTROLYTIC CAPACIT	CEXA470M25
C303,304	CERAMIC CAPACITOR	CCCSL470J50	C511,512	ELECTROLYTIC CAPACIT	CEXA221M25
C305,306	ELECT. CAPACITOR	CEAS2R2M50	C513,514	AUDIO FILM CAPACITOR	CFTXA224J50
C309,310	AUDIO FILM CAPACITOR	CFTXA153J50	C515,516	AUDIO FILM CAPACITOR	CFTXA333J50
C311,312	AUDIO FILM CAPACITOR	CFTXA823J50	C517,518	AUDIO FILM CAPACITOR	CFTXA224J50
C313,314	MYLAR FILM CAPACITOR	CQMA332K50	C519,520	AUDIO FILM CAPACITOR	CFTXA563J50
C315,316	AUDIO FILM CAPACITOR	CFTXA183J50	C521,522	ELECTROLYTIC CAPACIT	CEXA220M25
C317,318	ELECT. CAPACITOR	CEAS2R2M50	C523,524	CERAMIC CAPACITOR	CCCSL390J50
C321,322	CERAMIC CAPACITOR	CCCSL390J50	C525,526	ELECTROLYTIC CAPACIT	CEXA471M25
C327,328	AUDIO FILM CAPACITOR	CFTXA823J50	C531,532	CERAMIC CAPACITOR	CCCSL271J50
C329,330	AUDIO FILM CAPACITOR	CFTXA104J50	C533,534	CERAMIC CAPACITOR	CKCYB681K50
C331,332	ELECT. CAPACITOR	CEAS470M25	C535,536	CERAMIC CAPACITOR	CCCSL221K500
C333,334	ELECT. CAPACITOR	CEAS331M25	C537	CERAMIC CAPACITOR	CKDYF103Z50
C335,336	ELECT. CAPACITOR	CEAS470M25	C538	CERAMIC CAPACITOR	CKCYF103Z50
C339,340	ELECT. CAPACITOR	CEAS100M50	C539	CERAMIC CAPACITOR	CKDYF103Z50

Mark No.	Description	Parts No.	Mark No.	Description	Parts No.
RESISTORS			OTHERS		
R505,506	CARBONFILM RESISTOR	RD1/8PM272J	CN11	CONNECTOR(4P)	KPC4
R527,528	CARBON FILM RESISTOR	RDR1/4PM6R8F	CN16	CONNECTOR(7P)	KPC7
R529,530	CARBON FILM RESISTOR	RDR1/4PM820F			
R533,534	CARBON FILM RESISTOR	RDR1/4PM153F		SCREW	ABA-298
R537,538	CARBON FILM RESISTOR	RDR1/4PM152F			
R541,542	CARBON FILM RESISTOR	RDR1/4PM222F	SPEAKER TERM ASSY		
R568	CARBONFILM RESISTOR	RD1/8PM010J	RELAYS		
R569	CARBONFILM RESISTOR	RD1/8PM2R2J	RY901,902	RELAY	ASR-112
	Other resistors	RD1/4PM□□□J	RY903	RELAY	ASR-111
OTHERS			COILS		
	PIN JACK(1P)	AKB1025	L901,902	COIL	ATH1053
	PIN JACK(1P)	AKB1026			
HEADPHONE ASSY			CAPACITORS		
CAPACITORS			C901-904	AUDIO FILM CAPACITOR	CFTXA104J50
C951,952	CERAMIC CAPACITOR	CKCYB392K50	C905-908	AUDIO FILM CAPACITOR	CFTXA223J50
OTHER			C909-912	POLYESTER CAPACITOR	CQMXA472J100
	JACK	AKN1002	C913-916	AUDIO FILM CAPACITOR	CFTXA223J50
POWER SUPPLY ASSY			RESISTORS		
SEMICONDUCTORS			△ R901,902	METAL OXIDE RESISTOR	RS1LMF101J
Q603	TRANSISTOR	2SB1274	△ R903,904	METAL OXIDE RESISTOR	RS2LMF331J
Q605	TRANSISTOR	2SD1913	△ R907,908	METAL OXIDE RESISTOR	RS2LMF100J
Q606	TRANSISTOR	2SB1274	R909-912	CARBON FILM RESISTOR	RD1/4PM100J
Q607	TRANSISTOR	2SD1913			
Q608	TRANSISTOR	2SB1274			
Q609	TRANSISTOR	2SC1845	OTHER		
Q610	TRANSISTOR	2SA992		SPEAKER TERMINAL(4P)	AKE1017
Q611	TRANSISTOR	2SD1913			
D605,606	ZENER DIODE	RD24ESB1			
D607	ZENER DIODE	RD18ESB			
D608-611	DIODE	S5566			
D616	DIODE	HSS104-02			
D617-620	ZENER DIODE	RD22ESB3			
CAPACITORS			DIODE ASSY		
C605,606	ELECT. CAPACITOR	CEAS101M50	SEMICONDUCTOR		
C607,608	ELECT. CAPACITOR	CEAS010M50	D621	DIODE	RB602(E)
C609	CERAMIC CAPACITOR	CKCYB471K50			
C610	ELECT. CAPACITOR	CEAS101M63			
C611	ELECT. CAPACITOR	CEAS3R3M50			
△ C613,614	ELECT. CAPACITOR	CEAS470M50	REC OUT ASSY		
△ C615	POLYESTER CAPACITOR	CQMXA104J100	CAPACITORS		
△ C617	CKA (0.01/AC400V)	ACG1003	C803-810	CERAMIC CAPACITOR	CKCYB331K50
C619,620	ELECT. CAPACITOR	CEAS100M50			
C623,624	ELECT. CAPACITOR	CEAS100M50	RESISTORS		
C625	CERAMIC CAPACITOR	CKCYX473M25	R803-806	CARBON FILM RESISTOR	RD1/4PM681J
RESISTORS			R807,808	CARBONFILM RESISTOR	RD1/8PM681J
△ R601,602	FUSIBLE RESISTOR	RFA1/4PS4R7J	R809,810	CARBONFILM RESISTOR	RD1/8PM221J
△ R605,606	METAL OXIDE RESISTOR	RS2LMF272J	R815	CARBON FILM RESISTOR	RD1/4PM220J
△ R609,610	FUSIBLE RESISTOR	RFA1/4PS680J			
R613	CARBON FILM RESISTOR	RD1/2PM332J	OTHERS		
R614	CARBON FILM RESISTOR	RD1/2PM222J	CN3	CONNECTOR(15P)	KPE15
				PIN JACK(4P)	AKB1019
R622	CARBONFILM RESISTOR	RD1/2PM103J	ROTARY FUNC ASSY		
	Other resistors	RD1/4PM□□□J	SWITCH		
			S981	SWITCH	ASD1015
			CAPACITOR		
			C981	CERAMIC CAPACITOR	CKCYH103Z50
			RESISTORS		
				All resistors	RD1/8PM□□□J

Mark No.	Description	Parts No.
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SR ASSY**OTHERS**

CN20	CONNECTOR(3P) JACK	KPE3 AKN-207
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SUBTRANS ASSY**SEMICONDUCTORS**

D651-655	DIODE	S5566
D657	DIODE	HSS104-02

RELAY

△ RY651	RELAY	ASR1036
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TRANSFORMER

△ T651	POWER TRANSFORMER	ATT1015
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CAPACITORS

C651	ELECT. CAPACITOR	CEAS471M25
C652	ELECT. CAPACITOR	CEAS101M25
△ C653	CKA (0.01/AC400V)	ACG1003

RESISTORS

△ R651	CARBON FILM RESISTOR	RD1/4PM222J
△ R652	CARBON FILM RESISTOR	RD1/2PM120J

PROTECTION ASSY**SEMICONDUCTORS**

Q139-142	TRANSISTOR	2SC2458
Q143	TRANSISTOR	2SA1115
Q144	TRANSISTOR	2SC2458
Q145	TRANSISTOR	2SC1815
D131	ZENER DIODE	RD12ESB
D134	DIODE	HSS104-02

CAPACITORS

C271,272	ELECT. CAPACITOR	CEAS471M6
C273	CERAMIC CAPACITOR	CKCYF103Z50
C274	ELECT. CAPACITOR	CEAS101M25
C275	ELECT. CAPACITOR	CEAS010M100

RESISTORS

△ R217	FUSIBLE RESISTOR	RFA1/4PS221J
R218	CARBON FILM RESISTOR	RD1/4PM103J
R219	CARBON FILM RESISTOR	RD1/4PM680J
R220	CARBON FILM RESISTOR	RD1/4PM154J
	Other resistors	RD1/8PM□□□J

VR ASSY**SEMICONDUCTOR**

IC252	OP-AMP-IC	M5220P
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CAPACITORS

C255,256	ELECTROLYTIC CAPACIT	CEXA2R2M50
C257,258	PLSTYRENE CAPACITOR	CQSA561J50
C261,262	ELECTROLYTIC CAPACIT	CEXA470M50
C263,264	ELECTROLYTIC CAPACIT	CEXA221M25
C265,266	CERAMIC CAPACITOR	CKCYF103Z50
C269,270	CERAMIC CAPACITOR	CCCSL470J50
C280	CERAMIC CAPACITOR	CKCYF103Z50

Mark No.	Description	Parts No.
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RESISTORS

VR251	VARIABLE RESISTOR	ACX1072
R261,262	CARBON FILM RESISTOR	RDR1/4PM101J
R263,264	CARBON FILM RESISTOR	RDR1/4PM104J
R265,266	CARBON FILM RESISTOR	RDR1/4PM271J
R267,268	CARBON FILM RESISTOR	RDR1/4PM122J

R271,272	CARBON FILM RESISTOR	RDR1/4PM101J
R273,274	CARBON FILM RESISTOR	RDR1/4PM102J
R290,291	CARBON FILM RESISTOR	RD1/4PM220J

OTHERS

CN8	JUMPER CONNECTOR	KPC8
CN22	CONNECTOR(8P)	KPE8

POWER L ASSY**SEMICONDUCTORS**

Q101,103	TRANSISTOR	2SC1845
Q105	N-DUAL-FET	2SK389NK
Q107,109	TRANSISTOR	2SC1845
Q111	TRANSISTOR	2SC1845
Q113,115	TRANSISTOR	2SA992

Q117,119	TRANSISTOR	2SC1845
Q121	TRANSISTOR	2SA1145
Q123	TRANSISTOR	2SC2705
Q125,127	TRANSISTOR	2SC1845
Q129	TRANSISTOR	2SA992

Q133	TRANSISTOR	2SC2603
Q135	TRANSISTOR	2SC2705
Q137	TRANSISTOR	2SC1845
Q147	TRANSISTOR	2SA1145
Q149	TRANSISTOR	2SC3298

Q151	TRANSISTOR	2SA1306
Q157	N-FET	2SK246
Q159,161	TRANSISTOR	2SC1845
D101	ZENER DIODE	RD24ESB
D103	DIODE	HSS104-02

D105	LED(RED)	AEL-437
D107	DIODE	HSS104-02
D109	LED(RED)	AEL-437
D111,113	ZENER DIODE	RD13ESB3
D115,117	DIODE	HSS104-02

D127,129	DIODE	HSS104-02
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CAPACITORS

C101,103	CERAMIC CAPACITOR	CCCSL101J50
C105	CERAMIC CAPACITOR	CKCYB222K500
C107,109	CERAMIC CAPACITOR	CKCYB331K50
C111	ELECT. CAPACITOR	CEAS221M25
C113,115	CERAMIC CAPACITOR	CCCSL680K500

C117	ELECTROLYTIC CAPACIT	ACH1058
C119	AUDIO FILM CAPACITOR	CFTXA103J50
C121	CERAMIC CAPACITOR	CCCSL150K500
C123	ELECT. CAPACITOR	CEAS221M25
C125,127	ELECT. CAPACITOR	CEAS101M63

C129	ELECT. CAPACITOR	CEAS4R7M50
C131,133	CERAMIC CAPACITOR	CKDYF223Z50
C135,137	CERAMIC CAPACITOR	CKDYF223Z50
C139	CERAMIC CAPACITOR	CKCYB471K50
C141,143	CERAMIC CAPACITOR	CCCSL680K500

Mark	No.	Description	Parts No.	Mark	No.	Description	Parts No.
	C145	ELECT. CAPACITOR	CEAS100M50		D108	DIODE	HSS104-02
	C147	AUDIO FILM CAPACITOR	CFTXA103J50		D110	LED(RED)	AEL-437
	C149,151	CERAMIC CAPACITOR	CCCSL221J50		D112,114	ZENER DIODE	RD13ESB3
	C153	MYLAR FILM CAPACITOR	CQMA223K250		D116,118	DIODE	HSS104-02
RESISTORS					D128,130	DIODE	HSS104-02
	VR101	VR	VRTM6H503	CAPACITORS			
	R101	CARBON FILM RESISTOR	RDR1/4PM102J		C102,104	CERAMIC CAPACITOR	CCCSL101J50
	R103	CARBON FILM RESISTOR	RDR1/4PM224J		C106	CERAMIC CAPACITOR	CKCYB222K500
	R113	CARBON FILM RESISTOR	RDR1/4PM223J		C108,110	CERAMIC CAPACITOR	CKCYB331K50
	R115	CARBON FILM RESISTOR	RDR1/4PM681J		C112	ELECT. CAPACITOR	CEAS221M25
					C114,116	CERAMIC CAPACITOR	CCCSL680K500
△	R121	FUSIBLE RESISTOR	RFA1/4PS271J		C118	ELECT. CAPACITOR (220/50)	ACH1058
	R123	CARBON FILM RESISTOR	RDR1/4PM224J		C120	AUDIO FILM CAPACITOR	CFTXA103J50
△	R125,127	FUSIBLE RESISTOR	RFA1/4PS331J		C122	CERAMIC CAPACITOR	CCCSL150K500
	R129,131	CARBONFILM RESISTOR	RD1/2PM223J		C124	ELECT. CAPACITOR	CEAS221M25
△	R133	FUSIBLE RESISTOR	RFA1/4PS271J		C126,128	ELECT. CAPACITOR	CEAS101M63
	R137	CARBONFILM RESISTOR	RD1/8PM222J		C130	ELECT. CAPACITOR	CEAS4R7M50
△	R139	FUSIBLE RESISTOR	RFA1/4PS470J		C132,134	CERAMIC CAPACITOR	CKDYF223Z50
△	R141	FUSIBLE RESISTOR	RFA1/4PS101J		C136,138	CERAMIC CAPACITOR	CKDYF223Z50
△	R143	FUSIBLE RESISTOR	RFA1/4PS4R7J		C140	CERAMIC CAPACITOR	CKCYB471K50
△	R145	FUSIBLE RESISTOR	RFA1/4PS821J		C142,144	CERAMIC CAPACITOR	CCCSL680K500
	R151	CARBONFILM RESISTOR	RD1/8PM122J		C146	ELECT. CAPACITOR	CEAS100M50
△	R153	FUSIBLE RESISTOR	RFA1/4PS4R7J		C148	AUDIO FILM CAPACITOR	CFTXA103J50
△	R155	FUSIBLE RESISTOR	RFA1/4PS821J		C150,152	CERAMIC CAPACITOR	CCCSL221J50
△	R157,159	FUSIBLE RESISTOR	RFA1/4PS101J		C154	MYLAR FILM CAPACITOR	CQMA223K250
△	R161,163	FUSIBLE RESISTOR	RFA1/4PS101J	RESISTORS			
					VR102	VR	VRTM6H503
△	R165,167	FUSIBLE RESISTOR	RFA1/4PS271J		R102	CARBON FILM RESISTOR	RDR1/4PM102J
△	R169,171	FUSIBLE RESISTOR	RFA1/4PS470J		R104	CARBON FILM RESISTOR	RDR1/4PM224J
△	R173,175	FUSIBLE RESISTOR	RFA1/4PS4R7J		R114	CARBON FILM RESISTOR	RDR1/4PM223J
△	R177	RESISTOR (0.22, 5W)	ACN1075		R116	CARBON FILM RESISTOR	RDR1/4PM681J
△	R197	FUSIBLE RESISTOR	RFA1/4PS561J				
				△	R122	FUSIBLE RESISTOR	RFA1/4PS271J
	R199	FUSIBLE RESISTOR	RFA1/4PS101J		R124	CARBON FILM RESISTOR	RDR1/4PM224J
	R201	CARBONFILM RESISTOR	RD1/8PM821J	△	R126,128	FUSIBLE RESISTOR	RFA1/4PS331J
△	R207	CARBON FILM RESISTOR	RD1/4PMF392J		R130,132	CARBONFILM RESISTOR	RD1/2PM223J
		Other resistors	RD1/4PM□□□J	△	R134	FUSIBLE RESISTOR	RFA1/4PS271J
POWER R ASSY							
SEMICONDUCTORS					R138	CARBONFILM RESISTOR	RD1/8PM222J
	Q102,104	TRANSISTOR	2SC1845	△	R140	FUSIBLE RESISTOR	RFA1/4PS470J
	Q106	N-DUAL-FET	2SK389NK	△	R142	FUSIBLE RESISTOR	RFA1/4PS101J
	Q108,110	TRANSISTOR	2SC1845	△	R144	FUSIBLE RESISTOR	RFA1/4PS4R7J
	Q112	TRANSISTOR	2SC1845	△	R146	FUSIBLE RESISTOR	RFA1/4PS821J
	Q114,116	TRANSISTOR	2SA992				
					R152	CARBONFILM RESISTOR	RD1/8PM122J
	Q118,120	TRANSISTOR	2SC1845	△	R154	FUSIBLE RESISTOR	RFA1/4PS4R7J
	Q122	TRANSISTOR	2SA1145	△	R156	FUSIBLE RESISTOR	RFA1/4PS821J
	Q124	TRANSISTOR	2SC2705	△	R158,160	FUSIBLE RESISTOR	RFA1/4PS101J
	Q126,128	TRANSISTOR	2SC1845				
	Q130	TRANSISTOR	2SA992	△	R162,164	FUSIBLE RESISTOR	RFA1/4PS101J
				△	R166,168	FUSIBLE RESISTOR	RFA1/4PS271J
	Q134	TRANSISTOR	2SC2603	△	R170,172	FUSIBLE RESISTOR	RFA1/4PS470J
	Q136	TRANSISTOR	2SC2705	△	R174,176	FUSIBLE RESISTOR	RFA1/4PS4R7J
	Q138	TRANSISTOR	2SC1845	△	R178	RESISTOR (0.22, 5W)	ACN1075
	Q148	TRANSISTOR	2SA1145				
	Q150	TRANSISTOR	2SC3298	△	R198	FUSIBLE RESISTOR	RFA1/4PS561J
				△	R200	FUSIBLE RESISTOR	RFA1/4PS101J
	Q152	TRANSISTOR	2SA1306		R202	CARBONFILM RESISTOR	RD1/8PM821J
	Q158	N-FET	2SK246	△	R208	CARBON FILM RESISTOR	RD1/4PMF392J
	Q160,162	TRANSISTOR	2SC1845			Other resistors	RD1/4PM□□□J
	D102	ZENER DIODE	RD24ESB				
	D104	DIODE	HSS104-02				
	D106	LED(RED)	AEL-437				

4. ADJUSTMENTS

■ IDLE CURRENT ADJUSTMENT

1. Set the VOLUME CONTROL to minimum.
2. Set the POWER switch to ON.
3. Adjust VR101 (VR102) so that the voltage between OP and BB (AA) becomes $11 \pm 1\text{mV}$.

NOTE:

After turning on the power, wait at least 5 minutes before adjustment.

4. REGLAGE

■ REGLAGE DU COURANT DEWATTE

1. Après la mise sous tension, le moteur dure 5 minutes et n'introduire charge.
2. Régler VR101 (VR102) de façon à ce que la tension entre OP et BB(AA) soit de $11 \pm 1\text{mV}$.

4. AJUSTE

■ AJUSTE DE LA CORRIENTE DEVATIADA

1. El motor funciona por 5 mintos después de encender la unidad, sin introduzca.
2. Ajuste VR101(VR102) de forma que la tensión entre OP y BB(AA) sea $11 \pm 1\text{mV}$.

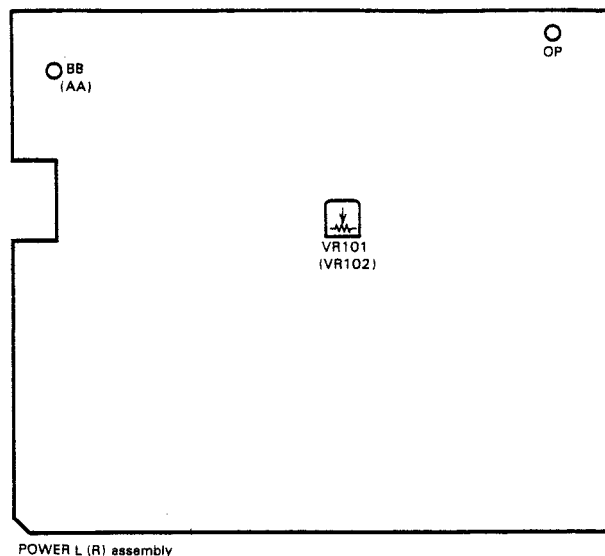


Fig. 1 Adjustment point

Fig. 1 Emplacement de réglage

Fig. 1 Puntos de ajuste

5. FOR A – 701R – G/HEZ

CONTRAST OF MISCELLANEOUS PARTS

NOTES:

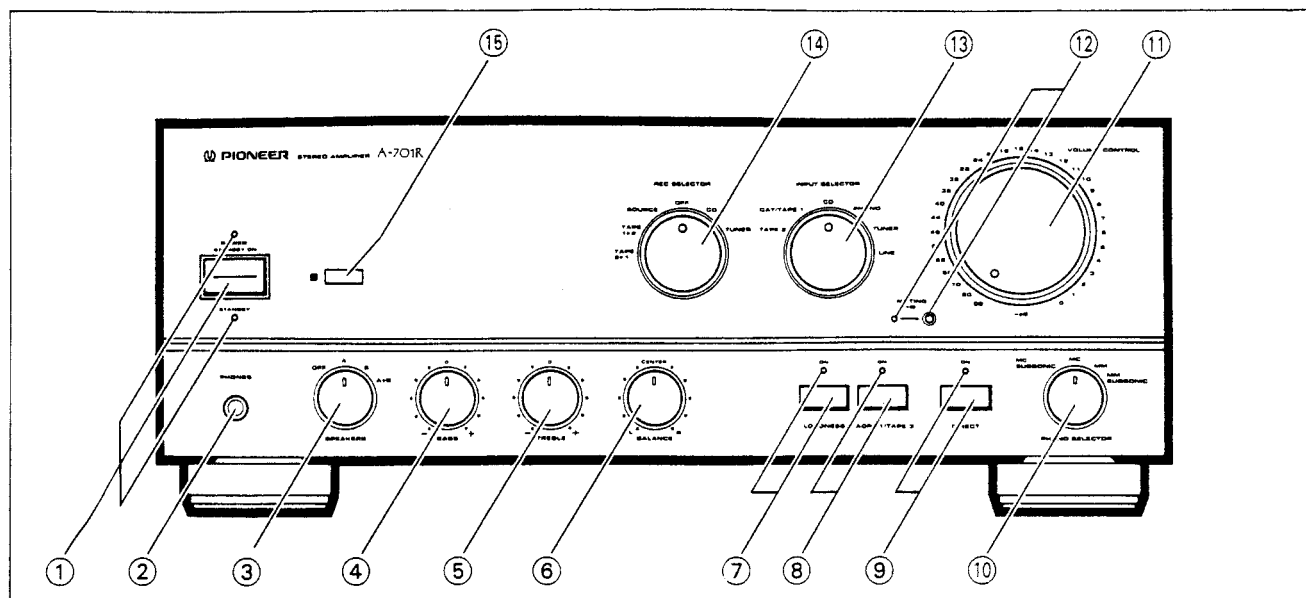
- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "●" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

A – 701R – G/HEZ and A – 701R/HEZ have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		A – 701R/HEZ	A – 701R – G/HEZ	
	Rotary knob L	AAB1222	AAB1287	for packing
	Rotary knob M (PLS)	AAB1223	AAB1288	
	Rotary knob S (PLS)	AAB1224	AAB1289	
	Push knob	AAD1536	AAD2287	
	Direct knob	AAD1560	AAD2288	
	Power knob	AAD2275	AAD2276	
	Name plate (METAL)	AAM1029		
	Packing case	AHD2269	AHD2270	
	Panel base	AMB1799	AMB2005	
	Front panel	ANB1512	ANB1521	
	Remote control unit	AXD1211	AXD1287	
	Screw	FBT40P080FZK	FBT40P080FCR	
NSP	Badge Brown 3156N		PAN1262	
	Battery cover	PZN1001	AZA1376	

6. PANEL FACILITIES

[FRONT PANEL]



① POWER STANDBY/ON switch/indicator

This is the switch for electric power.

ON: When set to the ON position, power is supplied and the unit becomes operational.

STANDBY: When set to the STANDBY position, the main power flow is cut and the unit is no longer fully operational. A minute flow of power feeds the unit to maintain operation readiness.

When the STANDBY indicator lights, the unit is in STANDBY.

② PHONES jack

When using headphones, insert the plug into this jack.

③ SPEAKERS selector switch

Use this switch to listen to the speaker systems connected to SPEAKERS terminals.

OFF:

No sound is heard from the speaker systems. Set to this position when listening with headphones.

A:

For reproduction of sound with the speaker system connected to the SPEAKERS A terminals.

B:

For reproduction of sound with the speaker system connected to the SPEAKERS B terminals.

A + B:

For reproduction of sound with the speaker systems connected to SPEAKERS A and B terminals.

④ BASS tone control

Use to adjust the low-frequency tone at low volume level. The center position is the flat (normal) position. When turned to the right, low-frequency tones are emphasized; when turned to the left, low-frequency tones are de-emphasized.

NOTE:

- This function does not operate when the DIRECT button is in the ON position.
- At volume levels lower than "32," the set tone control effect is obtained.
- At volume levels higher than "32," the effect becomes increasingly weaker.

⑤ TREBLE tone control

Use to adjust the high-frequency tone at low volume level. The center position is the flat (normal) position. When turned to the right, high-frequency tones are emphasized; when turned to the left, high-frequency tones are de-emphasized.

NOTE:

- This function does not operate when the DIRECT button is in the ON position.
- At volume levels lower than "32," the set tone control effect is obtained.
- At volume levels higher than "32," the effect becomes increasingly weaker.

⑥ BALANCE control

Should normally be left in the center position. Adjust balance if the sound is louder from one of the speakers. If the right side is louder, turn toward the LEFT position and if the left side is louder, turn toward the RIGHT position.

NOTE:

This function does not operate when the DIRECT button is in the ON position.

⑦ LOUDNESS button/indicator

Use when listening at low volume levels.

ON: (Red illumination)

The indicator lights: Boosts low and high frequencies to give added punch to playback at low volume.

OFF:

The indicator goes off: Should normally be left in this position.

NOTE:

This button does not operate when the DIRECT button is in the ON position.

⑧ ADPT 1/TAPE 3 button/indicator

Use this button to listen to tape playback, or to monitor a tape recording.

ON: (Red illumination)

The indicator lights: Press when listening to the playback sound of the cassette deck or the adaptor connected to the ADPT 1/TAPE 3 IN/PLAY jacks, or to monitor the sound being recorded on the cassette deck connected to the ADPT 1/TAPE 3 OUT/REC jacks.

OFF:

The indicator goes off: Normally leave the button in this position.

NOTE:

When the DIRECT button is set to ON, this function does not operate and no signal is output at the ADPT 1/TAPE 3 OUT/REC jacks.

⑨ DIRECT button/indicator

Use this button when you wish to bypass the various frequency adjusting circuits and adaptor jacks (ADPT 1/TAPE 3, ADPT 2, BASS, TREBLE, BALANCE, LOUDNESS).

ON: (Orange illumination)

When this button is in this position, the indicator lights and the signals input from the input jacks are reproduced without passing through the various frequency-adjusting circuits. This results in flat, pure sound which is a more faithful reproduction of the input source.

OFF:

When the button is in this position the indicator goes out and the signal passes through the various frequency adjusting circuits.

NOTE:

The settings for ⑦ through ⑨ when the power was last turned off are memorized and recalled when power is turned on, regardless of whether the AC cord was plugged in or not.

⑩ PHONO SELECTOR switch

Set in accordance with the type of cartridge used in your turntable.

MM:

Set to this position when using a moving magnet cartridge, or a MC (moving coil) cartridge with high output of 1 mV or more.

MC:

Set to this position when using a moving coil cartridge.

MM SUBSONIC/MC SUBSONIC:

Subsonic filter for moving coil or moving magnet cartridges to cut ultralow frequency noise less than 17 Hz generated when playing a warped record.

When using a high-output moving coil cartridge, set this switch to MM or MM SUBSONIC.

⑪ VOLUME CONTROL

Use to adjust volume level.

NOTE:

This unit is equipped with a circuit that attenuates the effect of tone and loudness controls as volume is turned up.

⑫ MUTING button/indicator

Use to temporarily cut sound volume.

ON: (Red illumination)

The indicator lights. The sound volume will be cut off.

OFF:

The indicator goes off. The sound will return to its previous volume.

NOTE:

If the AC cord was unplugged, this will be off when power is turned on, even if it was on before power was turned off.

⑬ INPUT SELECTOR switch

Use to select playback source.

LINE:

Set to this position when listening to the programs from a component connected to the LINE jacks.

TUNER:

Set to this position when listening to AM or FM broadcasts with a tuner.

PHONO:

Set to this position when listening to record playback on a turntable.

CD:

Set to this position when listening to a compact disc playback with a CD player.

DAT/TAPE 1:

For playback with a cassette deck or digital audio tape deck connected to the DAT/TAPE 1 jacks.

TAPE 2:

For playback with a cassette deck connected to the TAPE 2 jacks.

⑭ REC SELECTOR switch

Switch to select recording signal. When set at other positions than SOURCE or OFF, signals can be recorded during playback of the equipment selected by INPUT SELECTOR switch.

TUNER:

To record from a TUNER.

CD:

To record from a CD player.

OFF:

In this position nothing from the REC jacks of DAT/TAPE 1 and TAPE 2 will be output. Select it when not recording; output to cassette decks will be disconnected, improving sound quality.

SOURCE:

To record the equipment selected by INPUT SELECTOR switch.

TAPE:

1 ► 2:

To record (copy) from the cassette deck of DAT/TAPE 1 jacks, over to the cassette deck of TAPE 2 jacks.

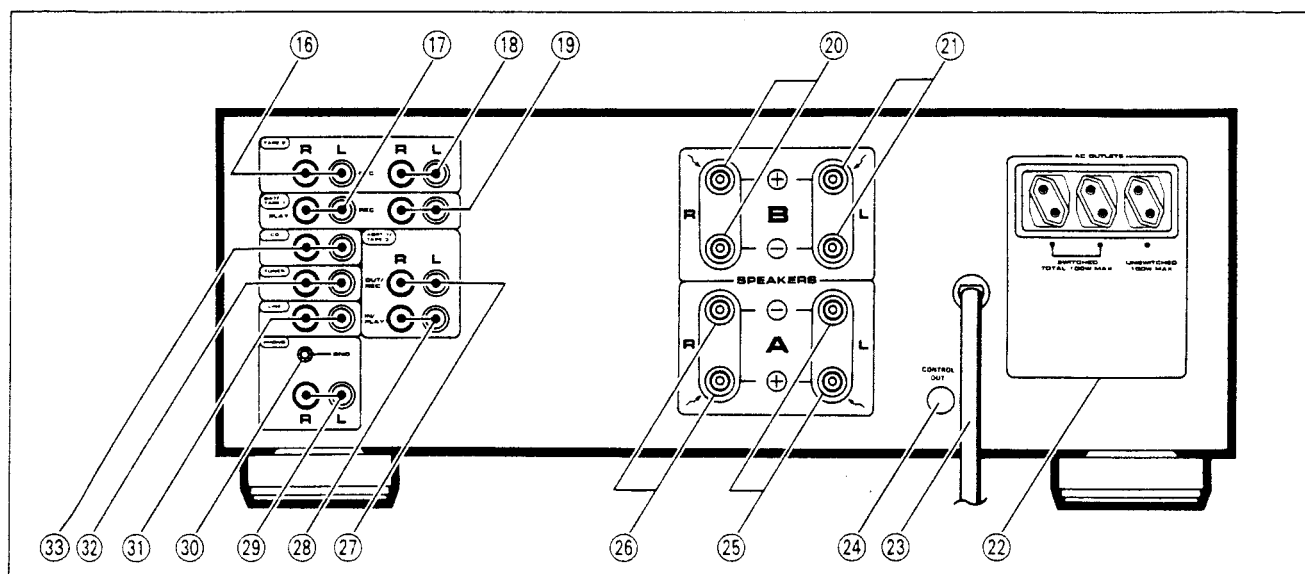
2 ► 1:

To record (copy) from the cassette deck of TAPE 2 jacks, over to the cassette deck of DAT/TAPE 1 jacks.

NOTE:

The REC SELECTOR switch has no effect on the recording output of the ADPT 1/TAPE 3 jacks.

⑮ Remote sensor window

[REAR PANEL]


①⑥ TAPE 2 PLAY jacks

①⑦ DAT/TAPE 1 PLAY jacks

①⑧ TAPE 2 REC jacks

①⑨ DAT/TAPE 1 REC jacks

②⑩ SPEAKERS B terminals (right channel)

②⑪ SPEAKERS B terminals (left channel)

②② AC OUTLETS

- If the socket outlets on the associated equipment are not suitable for the plug supplied with the product, the plug must be removed and an appropriate one be fitted. The cut-off plug must be disposed of as an electrical shock hazard could occur if connected to a socket outlet.

②③ Power cord

Connect this cord to an AC wall socket, or the AC outlet of an audio timer.

②④ CONTROL OUT jack

②⑤ SPEAKERS A terminals (left channel)

②⑥ SPEAKERS A terminals (right channel)

②⑦ ADPT 1/TAPE 3 OUT/REC jacks

②⑧ ADPT 1/TAPE 3 IN/PLAY jacks

②⑨ PHONO jacks

③⑩ Turntable ground terminal (GND)

③① LINE jacks

③② TUNER jacks

③③ CD jacks

7. SPECIFICATIONS

Continuous power output (both channels driven at 20 Hz to 20 kHz)**	
T.H.D. 0.007 %, 8 Ω	70 W + 70 W*
T.H.D. 0.009 %, 4 Ω	95 W + 95 W*
DIN Continuous power output (both channels driven at 1 kHz)	
T.H.D. 1.0 %, 8 Ω	80 W + 80 W
T.H.D. 1.0 %, 4 Ω	120 W + 120 W
Power bandwidth	
0.05 %, 8 Ω	5 Hz — 80 kHz*
Damping factor	
(1 kHz/20 Hz to 20 kHz), 8 Ω	160/100
Dynamic power output (on EIA dynamic test signal)	
4 Ω /2 Ω	150 W/200 W
Total harmonic distortion**	
20 Hz to 20 kHz, 70 W, 8 Ω	0.007 %*
20 Hz to 20 kHz, 95 W, 4 Ω	0.009 %*
Inter-modulation distortion (at rated output)	0.007 %*

* Above specifications are for when power supply is 230 V.

Input sensitivity/impedance	
PHONO (MM)	2.5 mV/50 k Ω
PHONO (MC)	0.2 mV/100 Ω
CD, TUNER, LINE, TAPE	150 mV/50 k Ω
PHONO overload level	
1 kHz, T.H.D. 0.1 % (MM/MC)	200 mV/15 mV
Output level/impedance	
TAPE REC, ADAPTOR OUTPUT	150 mV/1 k Ω
Frequency response	
PHONO (MM)	20 Hz to 20 kHz $\pm$ 0.2 dB
PHONO (MC)	20 Hz to 20 kHz $\pm$ 0.3 dB
CD, TUNER, LINE, TAPE	1 Hz to 150 kHz $\pm$ 0.5 dB*
Tone control (volume control set at -40 dB position)	
BASS	$\pm$ 8 dB (100 Hz)
TREBLE	$\pm$ 8 dB (10 kHz)
Loudness contour (volume control set at -40 dB position)	
.....	+5 dB (100 Hz)/+3 dB (10 kHz)
Filter (SUBSONIC)	17 Hz (12 dB/oct.)
Signal-to-Noise ratio (IHF short circuit, A network)	
PHONO (MM, 5 mV input/MC, 0.5 mV input)	94 dB/76 dB*
CD, TUNER, LINE, TAPE	110 dB*
Signal-to-Noise ratio (DIN, continuous power/50 mW)	
PHONO (MM)	74 dB/72 dB*
CD, TUNER, LINE, TAPE	92 dB/81 dB*

Power Supply/Miscellaneous

Power Requirements	a.c. 220 — 230 Volts, 50/60 Hz
Power Consumption	650 W
AC outlets	
Switched (x 2)	100 W
Unswitched (x 1)	100 W
Dimensions	420 (W) x 435 (D) x 162 (H) mm
Weight (without package)	13.3 kg

Accessories

Operating instructions	1
Remote control unit	1
Batteries	2

NOTE:

Specifications and design subject to possible modification without notice, due to improvements.

* When the DIRECT button is set to ON.

** Measured by Audio Spectrum Analyzer.